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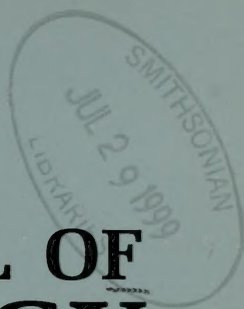
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Cover illustration: The sawfly, *Cimbex connatus*. photo: D. Wilson

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CIMBEX CONNATUS (SCHRANK)
(HYMENOPTERA: CIMBICIDAE):
A RARE SPECIES OF SAWFLY IN THE BRITISH ISLES

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NEIL D. SPRINGATE

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 London SW7 5BD.*

The Cimbicidae is a widespread, but relatively small, family of sawflies with an estimated 130 species (Gaston, 1993) and is divided into 4 subfamilies, Cimbicinae, Abiinae, Coryninae and Pachylostictinae (Gauld & Bolton, 1988). The Palaearctic faunas have not been investigated in detail since Gussakovskij (1947), although Ermolenko (1972), Zhelokhovtsev (1988) and Viitasaari (1990) revised those of the Ukraine, the western part of the Soviet Union and Finland, respectively. Benson (1951: 39–40) noted significant variation and variability between adult specimens and stated that the entire family required extensive re-analysis with reference to the characters used to define species and the correlation of larvae and adults. Further, Lorenz and Kraus (1957) observed great variability within species of *Cimbex* in their key to larvae.

The British fauna was revised most recently by Quinlan and Gauld (1981), although a more recent key to genera exists (Wright, 1990), who recorded 2 subfamilies (Cimbicinae and Abiinae), 4 genera and 11 species and deleted the subfamily Coryninae from the British faunal list. Of the three British species of *Cimbex*, only *C. femoratus* (L.) is considered to be relatively common; *C. connatus* (Schrank, 1776) and *C. luteus* (L.) are encountered rarely, particularly the former.

C. connatus feeds on both *Alnus glutinosa* (L.) Gaertn. and *A. incana* (L.) Moench (e.g., Gussakovskij, 1947; McVean, 1953; Ermolenko, 1972; Pieronek, 1979) and appears to be widespread within the Palaearctic region, with the exception of Japan. Adults of this univoltine species fly between May and August (e.g., Benson, 1951) and larvae may be found from July to September (Lorenz and Kraus, 1957; Verzhutskij, 1981), feeding in the upper crown at the leaf's edge (early instars) and, subsequently, consuming all but the petiole and the thickest parts of the blade (Pieronek, 1979). Other aspects of the species' biology are detailed in Pieronek (1979, 1985). The adult is illustrated in Gussakovskij (1947: 23) and Ermolenko (1972: 102 and opposite p. 112) and the larva is depicted in Lorenz and Kraus (1957: 255) and in Viitasaari (1990: 42).

In the last century and in the pre-1914 period of this, *C. connatus* was recorded from Suffolk, Kent, Surrey, Sussex, Devon and Cornwall, which suggests a relatively widespread distribution, south of a line from the Severn to the Wash (Benson, 1951; D. Sheppard, pers. comm.). Post-1945 records are restricted to larval data from the Leighan Valley, Devon in 1947 (Benson, 1951), leading to speculation that the species had become extinct in the United Kingdom. However, data from Eire (O'Connor *et al.*, 1997) suggests otherwise and indicates that *C. connatus* occurred in the British Isles, but that its habitat range was dwindling and, thus, was becoming rarer and collected less often.

In late July, 1997, the first author found a female of *C. connatus* alongside the River Nadder, near Compton Chamberlayne (60–70 m a.s.l.), in the Salisbury district

of Wiltshire. The habitat is a meandering stream with scattered specimens of *A. glutinosa* along its banks, within partially-grazed pasture, formerly water meadows, containing many species of nectar-producing flowers, including *Dipsacus pilosus* L. (small teasel), *Senecio aquaticus* Hill (marsh ragwort) and *Lythrum salicaria* L. (purple loosestrife) (Fig. 1). The specimen itself was found in long grass, less than 3 m from the bank, vibrating its wings rapidly which created a distinct buzzing sound. The pinned female was shown at the BENHS Annual Exhibition 1997 (Plate VI, Fig. 17 and front cover) and a formal identification made. This confirms the species' presence in the United Kingdom and is the first record for the county of Wiltshire.

The apparent disappearance of *C. connatus* from the British fauna requires comment. At least one other species of sawfly has intermittent records within the British faunal list, namely *Blasticotoma filiceti* Klug, which has led to suggestions that it was an occasional introduction, rather than a very rare breeding species (discussed in Benson, 1953; Key, 1998). Moreover, there are problems associated with tallying older British records of sawflies with modern occurrences or absences, for example, the data of Leach (1817) for Megalodontesidae (commentary in Perkins, 1929) and those of Stephens (1835) for Orussidae (commentary in Benson, 1951). However, the status of an occasional introduction, mistaken attribution or subsequent extinction do not apply to *C. connatus*; relatively widespread and authenticated material exists.

Several factors may be important in explaining the present status of *C. connatus* in the UK. Perhaps the most important of these may be the virtual disappearance of flood-plain forest in Britain (Peterken & Hughes, 1995), a consequence of systematic drainage of fens and carrs, which has reduced older woods to isolated remnants over the past 200 years (Yon & Tendron, 1981). In the 1990s, alder woods in the UK have suffered further damage from the widespread fungus, *Phytophthora cambivora* (Petri) Buisman, (Oomycota: Pythiaceae) (Anon., 1997). Thus, there has been severe cumulative pressure on its native host species, *A. glutinosa*, although some 580,000



Figure 1. Wiltshire, Compton Chamberlayne, River Nadder, vii. 1998. View downstream, flowing in easterly direction. photo: D. Anne.

specimens are estimated in England (Anon., 1997). In addition, *C. connatus* appears unable to colonize its alternative host in the Palaearctic, *A. incana*, within the British Isles. *A. incana* is not a native species, but one introduced in the 1780s (Rumsey, pers. comm.) which has been planted relatively widely in land restoration and reclamation projects for its tolerance of acidic soils and its nitrogen-fixing abilities (Wood & Thirgood, 1954; Zehetmayr, 1954; Shaw, pers. comm.). *A. glutinosa* and *A. incana* are not sympatric (preferring siliceous and calcareous soils, respectively (McVean, 1953)) and it is not known if Palaearctic populations of *C. connatus* are able to switch hosts facultatively.

These factors, and a more recent, yet nonetheless, saddening decline of interest in and funding for the investigation of British sawfly faunas, may have combined to give the impression of a disappearing species. Nevertheless, separately or together, these factors make for a rather *ad hoc* and unsatisfactory explanation. It is possible that, although suitable habitats for *C. connatus* may be in decline and the species itself appears to be very rare, careful study of alder-wood habitats, throughout the insect season, in the British Isles may reveal more material. On the basis of a singleton, and without further investigation, speculation upon *C. connatus* in the British Isles would be unwise. However, conservation of the remaining alder woodlands, and restoration by replanting of denuded ones, is vital in order to maintain suitable habitats for *C. connatus*. As a whole, the British sawfly fauna requires more widespread and systematic static trapping, rather than casual and sporadic sweeping, and employing specific methods for the sampling of crown faunas (e.g., Basset *et al.*, 1997). Methodical examination of and rearing from known and potential host-plants is also needed to fill the many gaps in our knowledge of British sawflies.

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**THE PREVIOUSLY UNKNOWN FEMALE OF
DELIAS ALBERTI TETAMBA ARORA,
(LEPIDOPTERA: PIERIDAE)**

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The Pierid genus *Delias* Hübner [1819] contains a large number of brightly coloured butterflies, many of which have become well adapted to montane habitats. The genus reaches its easternmost distribution in the Solomon Islands, where four species are known. Three of these species, *D. schoenbergi* Rothschild, 1895, *D. alberti* Rothschild, 1904, and *D. messalina* Arora, 1983, are endemic to the Solomon Islands and Bougainville; *D. lytaea* Godman & Salvin, 1878, is also known from New Britain and New Ireland. A review of Solomons *Delias* was provided by Arora (1983).

Delias alberti was described from Choiseul island, with two new subspecies, *guava* and *tetamba*, described by Arora in 1983, from Bougainville and Santa Isabel respectively, based on specimens collected by the Royal Society Expedition to the Solomon Islands in 1965. Arora also described *D. messalina orientalis* from Santa Isabel and Guadalcanal, from Royal Society Expedition material.

The type locality of both *alberti tetamba* and *messalina orientalis* is Santa Isabel, where 8 males of the former and 1 male and 2 females of the latter were collected, apparently by native collectors, in village gardens at Tatamba, on the south-east coast of the island (Arora, 1983: 23). A third female of *D. messalina orientalis* was taken on or near the summit of Mount Popomanaseu, Guadalcanal, also by the Royal Society Expedition. So far as is known, no further material of either taxon has been obtained since the Royal Society Expedition and the female of *D. alberti tetamba* remained unknown.

In 1996, the author led an expedition to Mount Popomanaseu, Guadalcanal, in an unsuccessful attempt to find the unknown male of the Danaine butterfly *Tiradelphe schneideri* Ackery & Vane-Wright, 1984 (Tennent, 1996; 1998). A series of both sexes of *D. messalina orientalis* and *D. alberti tetamba* was obtained and the female of the latter is described and illustrated (Plate No. IV, Figs 7, 8) for the first time. Specimens have been deposited at The Natural History Museum, London.

DESCRIPTION

Females of *alberti guava* and *alberti alberti* are morphologically quite different (Arora, 1983). The female of *alberti tetamba* is intermediate, in that it resembles the former on the upper surface and the latter underneath. On the upperside, the basal and discal areas of both fore and hind wings are pale greenish-yellow in *guava*; in *tetamba*, this area is bright lemon-yellow on the hind wing and restricted to a few basal scales of the same colour on the fore wing. Sub-apical markings are white in *guava* and yellow in *tetamba*.

The underside resembles that of *alberti alberti*, a major difference between them being the discal and basal areas of the forewing, which are white, tinged with pale yellow in the cell in *alberti* and bright yellow in *tetamba*.

Arora (1983) presented couplets to incorporate new taxa in keys provided by Talbot in his generic revision of *Delias* (Talbot, 1928–1937), including the male of *alberti tetamba*. The following modification to Talbot's key (Talbot, 1928–1937: 17) will allow inclusion of the female:

Section 1A

- 38 Hindwing below with distal border reaching the costa 38a
- Hindwing below with distal border not reaching costa;
anal area with orange suffusion *multicolor*
- Hindwing below with distal border not reaching costa;
anal area without orange suffusion. Forewing below with
the two anterior apical spots yellow *sacha*
- 38a Hindwing below with yellow discal spot small and not
extending to wing base; submarginal orange spots small *alberti guava*
- Hindwing below with yellow discal area extending to wing
base; submarginal orange spots large. 38b
- 38b Wings above with submarginal markings white, large,
wedge-shaped *alberti alberti*
- Wings above with submarginal markings yellow, vestigial,
streaked *alberti tetamba*

DISCUSSION

The author stayed at Tatamba for several days in March 1997 in the hope of finding *D. alberti tetamba* but, despite a search of open and forested areas in the gardens of Tatamba and nearby Hukamoto villages, the only *Delias* specimen seen was a fresh male *Delias schoenbergi isabellae* Rothschild & Jordan, 1901.

It is remarkable that both *D. messalina orientalis* and *D. alberti tetamba* occur at sea level on Santa Isabel in disturbed cultivated habitat in secondary growth, and in a montane forest habitat between 1200 m and 2330 m on Guadalcanal, some 60 kilometres distant, without apparently occurring anywhere in between. Recent field work suggests that the butterfly fauna of the Solomon Islands is poorly known, although it may be said that a *Delias* occurring as a lowland (i.e. coastal) species on Guadalcanal, or on the western part of Florida, would be unlikely to have escaped attention.

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 SHORT COMMUNICATION

A nest of the wasp *Odynerus spinipes* (L.) (Hymenoptera: Eumenidae) robbed by *Lasius niger* (L.) ants.—On a brief visit to Crow Wood and Meadow, a wildlife reserve of the Herefordshire Wildlife Trust at Turnastone, Herefordshire, SO340359, with a party from the Dipterists Forum and the Bees, Wasps and Ants Recording Society on 13.vi.1997, I came upon an active colony of the eumenid wasp *Odynerus spinipes* (L.) nesting in a floodcut vertical bank in alluvium above a small stream. The rubytailed wasps *Pseudospinolia neglecta* (Shuckard) and *Chrysis viridula* L. were active about the bank.

One wasp was seen affixing a pellet of wet mud to the latticework of the downwardly-curved 'chimney' outside its burrow, but there was no time to study the origin of the material used. Returning wasps entered their burrows directly, so that it would have been possible to photograph them only by selecting one burrow and waiting for its owner to return. Just one wasp got no further than putting its head and thorax into its chimney and then backed away, repeating this and finally sitting outside its nest on the vertical bank. The explanation became apparent after a minute or so, when a *Lasius niger* (L.) ant appeared from between the soil lattice of the chimney (Plate IV). Other ants emerged, then one carried a green weevil larva with which the nest had been provisioned. The wasp just sat and watched. Soon a trail of ants co-operated to carry off six weevil larvae in quick succession, 20cm. up the bank to a hole resembling a wasp burrow that had lost its chimney. Some of the prey were removed between the network of mud particles of the chimney.

The ants had presumably gained access to the nest without having had to climb down the outside of the chimney and through its apical opening, as they would have to do in the case of the more solid-walled chimneys of *Odynerus reniformis* (Gmelin). What advantage the wasps gained by their flimsy construction I was unable to discover without being left behind to face the next shower beneath an even flimsier cover of leaves.

Other aculeates at this bank were: *Crossocerus megacephalus* (Rossius), *Dipogon variegatus* (L.), *LasioGLOSSUM leucozonium* (Schrank) and *L. rufitarse* (Zett.), all females.—R. W. J. UFFEN, 4 Mardley Avenue, Welwyn, Herts. AL6 0UD.

SHORT COMMUNICATION

Two new records of the myrmecophile spider *Thyreosthenius biovatus* Cambridge in nests of *Formica rufa* L. On 27 September 1997, while looking for the "guest ant" *Formicoxenus nitidulus* Nylander in nests of the red wood ant *Formica rufa* L. (Robinson, 1998) at Gait Barrows National Nature Reserve, Lancashire (VC 60, SD483775), on one nest I noticed very small (c. 2 mm.) "money spiders", which were being ignored by the *F. rufa* workers, whose red-brown and leaden-grey colouring they rather resembled. They were identified by Dr Jennifer Newton as the myrmecophile spider *Thyreosthenius biovatus* Cambridge. On 29 September she took a male and female at the same nest and the identification has been confirmed by Chris Felton at Liverpool Museum, where these specimens are now lodged. On 21 October I found male and female (det. J. M. Newton) on one nest on Arnside Knott, Cumbria (VC 69, SD455775).

This spider was first found in Britain by Donisthorpe in a *F. rufa* nest near Hastings in 1900. He studied them in observation nests of *F. rufa*, where on one occasion he saw one eating a small fly, and the workers never molested them (Donisthorpe, 1927). Bristowe (1958) suggests that the three Linyphiids which have adopted life in ants nests as a speciality have abandoned web-making entirely in the ant galleries and merely pounce on the little flies and Collembola which he had seen them eating. It seems that, like *F. nitidulus*, they are "uninvited lodgers" which neither harm their hosts nor are harmed by them, but unlike the ant they are occasionally found free-living outside ant nests (Roberts, 1987). Although Donisthorpe states: "I personally found both sexes of this spider in every *rufa* nest I examined, from the Highlands to the South Coast of England, and in every month of the year", it has seldom been recorded in the north of England. There is apparently a very old record without details for Cumberland, and the only detailed records (for Yorkshire) are for 1937 or earlier, so the specimens from Gait Barrows and Arnside Knott appear to be the first records for West Lancashire (VC 60) and Westmorland (VC 69) respectively, and the first substantiated records for 60 years in the north of England.—NEIL A. ROBINSON, 3 Abbey Drive, Natland, Kendal, Cumbria LA9 7QN.

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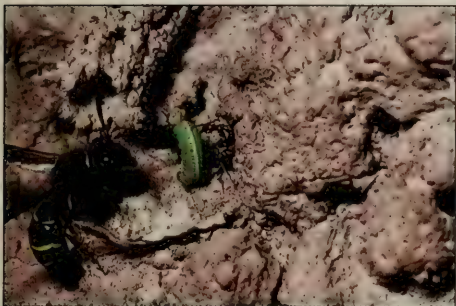
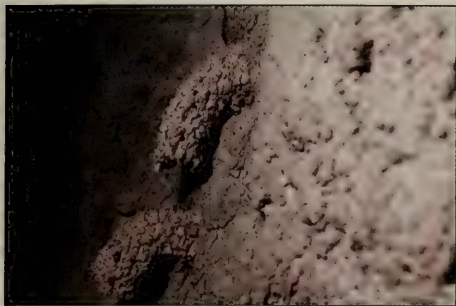
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Plate IV legends

- Fig. 1. *Odynerus spinipes* 'chimneys'. (see Uffen, p. 71).
 Fig. 2. *O. spinipes* placing wet mud pellet on 'chimney' of nest.
 Fig. 3. *O. spinipes* watching three *Lasius niger* stealing weevil larvae from nest.
 Fig. 4. *Lasius niger* with weevil larvae stolen from *O. spinipes* and being taken into their nest.

Delias alberti tetamba (see Tennent, p. 69)

- Fig. 5. (left top row) Male, Solomon Islands, Guadalcanal, Mount Popomanaseu, summit and summit ridge, 2200–2330 m, 30.vii.1996, W. J. Tennent, Imperial College Solomon Islands Expedition 1996 (NHM).
 Fig. 6. (right top row) Male underside, same data (NHM).
 Fig. 7. (left bottom row) Female, 28.vii.1996 (NHM).
 Fig. 8. (right bottom row) Female underside, 29.vii.1996 (NHM).



1-4. *Odynerus spinipes*



5-8. *Delias alberti tetamba*

THE BENHS CONSERVATION WORKING GROUP PRIORITY SPECIES LISTS: MACRO-MOTHS AND DIPTERA

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The Society's Conservation Working Group (CWG) was founded in 1994 and is undertaking a number of initiatives with the aim of bringing the expertise of members to bear on matters relating to the conservation of the UK invertebrate fauna. It is hoped that a summary of progress so far and current activities will be published in this *Journal* in due course (Miles and Dobson, *in prep.*).

At the meeting of the CWG held in September 1996, it was proposed that the group initiate the development and publication of short lists of species from a range of invertebrate taxa, with the aim of expressing the field naturalists' views of which species deserve special attention, and where the Society can contribute in some way to their conservation. The rationale and the criteria for inclusion in these lists are discussed in this article, along with the publication of preliminary lists of Macro-moths and Diptera.

It was decided that no attempt should be made to select species on the basis of objective criteria. Not only does the BENHS lack the data or resources to do so, but these lists are not intended to be analogous to Red Data Book (RDB) or Biodiversity Action Plan (BAP) lists. Instead it is hoped that the expression of field naturalists' views through these lists will provide a focus for discussion and action on conservation problems.

A key characteristic of the lists is that they will be regularly updated in response to comments and suggestions by members, and in response to changing circumstances. It is intended that, due to the 'dynamic' nature of these lists, they will continue to reflect current issues and areas of concern.

PURPOSES OF THE LISTS

- In the first place, these lists prioritize a range of species where the expertise of members can contribute to our understanding of their status, distribution, life-histories and habitat requirements.

Society and recording scheme members are encouraged to submit their biological observations, records and other comments relating to the conservation of these species to the CWG. We would like to compile the fullest possible picture of these species, their habitats, behaviour and conservation status, and no detail that members can supply is too small to be of interest in this stage. All requests for confidentiality will naturally be honoured.

The CWG will compile and assess data on the status, distribution and autecology of the priority species. In appropriate cases this will lead to the development of strategies for their conservation, e.g. recommendations for habitat management.

Progress reports will appear periodically in the pages of this *Journal*.

Additional uses of the Priority Species Lists will be:

- To serve as an expression of the field naturalists' views as to which species are deserving of special attention.
- To reflect and highlight current issues and areas of concern to members.
- To prioritize species for any kind of project, research or action plan carried out by, or in conjunction with the BENHS/CWG.
- To raise the profile of selected species of invertebrate, particularly those in taxa not specifically dealt with by other organizations.
- To provide a resource to be called upon when the Society's views and input are elicited by other organizations (e.g. the Quinquennial Review of schedules 5 and 8 of the Wildlife and Countryside Act, 1981).
- To stimulate both debate among BENHS and recording scheme members, regarding the status of the selected species, and appropriate conservation measures.

CRITERIA FOR INCLUSION

In order to reflect properly the views of field naturalists, the criteria for inclusion are broadly drafted so as to allow inclusion of a species on the basis of partially subjective views of its status. These criteria can be summarized as:

A species whose status in the UK is viewed with some concern by field naturalists, and where targeting or research by BENHS members might reasonably be expected to contribute in some way to its conservation.

Examples of particular criteria include:

- Species where a paucity of recent records raises the possibility, in the view of field naturalists, that the species may be in decline, regionally or nationally.
- Species, whether rare or not, which are thought by field naturalists to be in steep decline due to loss of habitat or other causes.
- Species subject to co-operative projects between the BENHS and other bodies.
- Species whose actual status, in the opinion of field naturalists, is markedly at variance with the status of the species as reflected in recent literature, or with its RDB status, if any.
- Those species which the CWG wants particularly to promote, e.g. to raise the profile of the species, or in the context of targeted field work, etc.
- Species chosen as representatives of a particular habitat, where the value of the habitat for invertebrates is the subject of study by the BENHS, or where the habitat itself appears to be under threat.
- Scarce species where sufficient expertise exists amongst BENHS members to form the basis of meaningful proposals for the species' conservation.
- (The converse of paragraph g.) Scarce species where little is known of their biology and habitat requirements, and where it is thought that field work and other research by the CWG and its correspondents can make a contribution to our understanding of it, and thus its conservation.

The adoption of pragmatic criteria for the Priority Species Lists enables the inclusion of a species on the basis of its own 'individualized' criteria. A disadvantage of this approach is that the reasons for inclusion of any particular species might not be self-evident. In view of this it is essential that each species on the lists is accompanied by a short statement setting out the reasons for its inclusion.

COMPILATION AND DEVELOPMENT OF THE PRIORITY SPECIES LISTS

Additional considerations relating to the compilation of the lists include:

- The lists will be dynamic not static, and will be regularly updated in response to new information and suggestions from members and from other quarters.
- The lists should not be too long as each species included has a practical implication. This may range from the relatively passive e.g. a 'watching brief' to an active practical commitment, e.g. a targeted field meeting.
- The lists will not be ranked. To attempt this would be difficult, contentious and without foundation. Taxonomic order is recommended.
- The lists should be compiled independently of existing lists. For example, there is no reason why all species should be RDB 1–3, and non-RDB species should be included where they fulfil the adopted criteria. Similarly, although there may be good reasons to include certain BAP species, the Priority Species Lists are not in any way tied to the BAP. Field naturalists' views are paramount, and the CWG lists operate on a far broader front, accepting a wide range of criteria for inclusion.
- In order to avoid possible duplication of effort, it will often be desirable to consult with other organizations prior to publication of these lists.

CWG PRIORITY SPECIES LISTS

Abbreviations. RDB: Red Data Book. N (a/b): Notable. [Provisional RDB statuses are according to Waring (in press) (Macro-moths), which are included here with the kind permission of the author: and according to Falk (1991) (Diptera). B&F No.; Bradley and Fletcher check list reference number.] BAP: Biodiversity Action Plan. S, M and L: Short, Middle and Long lists.

NB 'Middle List' refers to the revision dated 25 July 1997. It appears that the 'Long' list may have been shelved indefinitely, and in any case requires substantial revision. BAP L designations should therefore be regarded as nominal at present.

MACRO-MOTHS [Version 1, Spring 1998]

| Species | B&F No. | Status | Reason/s for inclusion |
|---|---------|-------------|---|
| <i>Adscita globulariae</i> (Hübner.) scarce forester (Zygaenidae) | 0165 | Na, BAP L | A local species, some evidence of decline |
| <i>Aplasta ononaria</i> (Fuess.) rest harrow (Geometridae) | 1664 | RDB3, BAP L | Currently only known from a few sites in Kent. Biology insufficiently known |
| <i>Scopula emutaria</i> (Hübner.) rosy wave (Geometridae) | 1691 | Nb | A local species, status requires investigation |
| <i>Trichopteryx polycommata</i> (D.&S.) barred tooth-striped (Geometridae) | 1880 | Na, BAP M | No recent records from a number of previous sites in S. England |
| <i>Spilosoma urticae</i> (Esp.) water ermine (Arctiidae) | 2062 | Nb, BAP L | Scattered records only; status requires investigation |
| <i>Meganola strigula</i> (D.&S.) small black arches (Nolidae) | 2075 | Na, BAP L | Confined to oak woods in S. England; some evidence of decline |

| Species | B&F No. | Status | Reason/s for inclusion |
|---|---------|-------------|--|
| <i>Spaelotis ravida</i> (D.&S.) stout dart (Noctuidae) | 2113 | Local | Variable in abundance but some evidence of decline. Life-history poorly understood |
| <i>Mythimna turca</i> (L.) double line (Noctuidae) | 2191 | Nb, BAP M | Scattered records; some evidence of its disappearance from certain sites |
| <i>Jodia croceago</i> (D.&S.) orange upperwing (Noctuidae) | 2257 | RDB1, BAP M | Virtually no recent confirmed records |
| <i>Oria musculosa</i> (Hübner.) Brighton wainscot (Noctuidae) | 2378 | Na, BAP M | Some evidence of decline; possibly due to changes in agricultural practices? |
| <i>Panemeria tenebrata</i> (Scop.) small yellow underwing (Noctuidae) | 2397 | Local | Scattered records; status requires investigation |
| <i>Heliiothis maritima warneckeii</i> (Bours.) shoulder-striped clover (Noctuidae) | 2402 | RDB3, BAP L | Known from only very few sites; some evidence of decline; few recent records |
| <i>Trisateles emortualis</i> (D.&S.) olive crescent (Noctuidae) | 2495 | RDB3, BAP M | Possibly confined to a few sites in SE England; current status uncertain |

DIPTERA [Version 1, Spring 1998]

| Species | Status |
|---|-------------|
| <i>Bombylius minor</i> L. (Bombyliidae) (A bee-fly) | RDB2, BAP M |
| <i>Thyridanthrax fenestratus</i> (Fallén) (Bombyliidae) (A bee-fly) | RDB3, BAP M |
| <i>Chrysotoxum octomaculatum</i> Curtis (Syrphidae) (A hoverfly) | RDB2, BAP S |

Reasons for inclusion

- A trio of scarce and very local species confined to certain areas of lowland heath in southern England, primarily Dorset, the New Forest and Surrey (unconfirmed older records of *B. minor* from Wales and the Isle of Man (Drake, 1991)).
- There is considerable scope for increasing our knowledge of the biology and habitat requirements of these species through field observations. Both the bee-flies may occur with some predictability at certain sites, and *T. fenestratus* can be readily identified in the field.
- Their habitats may be threatened both through neglect and through inappropriate management.
- Considering the known or probable association of each of these species with aculeate hymenoptera, hymenopterists may also take an interest in these species.

Note These three species are included in this preliminary list pending (in part) decisions as to the extent (if any) of formal involvement by the BENHS in implementing the BAP. The list will be updated when these matters are

clarified. It is hoped that in the mean-time, dipterists will submit additional suggestions.

CONCLUDING REMARKS

The preliminary lists of Macro-moths and Diptera presented above have been compiled by members of the CWG in consultation with a number of specialists. As a first attempt it is naturally hoped that the choices of included species are at least considered rational by BENHS members. On the other hand there seems to be no reason to avoid controversial choices in this context, and it is hoped that members with views as to the current and possible future inclusions will communicate their ideas and suggestions to us. These lists are intended to be dynamic reflections of current issues, not definitive statements of species status. As such it is hoped that debate among members as to suitable inclusions will focus attention on current issues, and that these issues will be reflected in new versions of the lists as they are published.

No formal procedure for updating the lists is required at this stage, although one may be introduced later if necessary. Lists will be reviewed regularly by the CWG in the light of comments and suggestions from correspondents, progress with existing Priority Species and information from other sources.

In addition to inviting comment on the current lists, we are now actively seeking to extend the range of invertebrate groups represented on these lists. In view of this we are seeking members who would be willing to compile, or assist in the compilation of preliminary lists covering other taxa. Please contact J. R. Dobson in the first instance if you feel you might be able to contribute in this respect. We also want suggestions for individual species belonging to any group of invertebrates. All suggestions should be accompanied by a brief statement giving the reason(s) that the species should be included, bearing in mind the criteria discussed in this article.

Please address correspondence on Macro-moths to J. W. Phillips, and all other correspondence to J. R. Dobson.

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ARMADILLIDIUM ALBUM DOLLFUS (ISOPODA) ON THE SEFTON COAST—IMPLICATIONS FOR CONSERVATION

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Armadillidium album is a coastal woodlouse and occurs on the upper strandline of sandy beaches that receive a continuous supply of driftwood (Vader & de Wolf 1988). The nocturnal *A. album* is known to burrow to depths of 10–20 cm (Harding & Sutton 1985; Atkinson & Felton 1993) feeding on bacteria and fungi (Vader & de Wolf 1988) associated with the decomposing driftwood.

A. album was thought to be rare (Harding & Sutton 1985), although now it is considered more widespread (Bratton 1991) and is probably 'local' in its distribution. Its worldwide distribution spans from the Mediterranean coasts of Italy to its northern-most point in Wigtownshire in Scotland (Oliver & Meechan 1993). Disturbance by man on existing and potential sites is increasing: sand extraction, beach cleaning and pollution have serious conservation implications for the survival of *A. album* (Harding & Sutton 1985; Vader & de Wolf 1988).

In this study, we investigated the effects of beach cleaning on the distribution of this woodlouse along the seaward edge of a stretch of sand dunes. Sand dunes are dynamic systems where sand is eroded or accreted by the action of wind. Constant deposition of sand on accreting dunes creates embryo dunes with a distinct flora that flourishes in a constant supply of wind-blown sand (NCC 1986). Eroding dunes cannot support an embryo-dune habitat due to a lack of sand supply. Embryo dune vegetation is characterized by an *Elytrigia juncea* foredune community, often with a *Elymus arenarius* sub-community (national vegetation classification SD5/SD7a) (Rodwell 1992).

METHODS & RESULTS

Armadillidium album was encountered in a pitfall-trap study of Raven Meols Local Nature Reserve (SD283055) on the Sefton Coast, during the period 19 July to 1 September 1993. Eight pitfall traps were placed at each of five sites along an area of embryo dunes: two sites directly behind the strandline, and the remaining three further away at an increased elevation. Identification was confirmed using Hopkin (1991) and Oliver & Meechan (1993). The strandline was rich in jetsam, mainly driftwood, rope and plastic containers. In this initial survey, *A. album* was recorded only from the two traps nearest to the strandline, suggesting that individuals are relatively sedentary, moving only 1 or 2 m up the beach at night and returning to the cover of the driftwood during the diurnal period. No attempt was made to determine the relative activity under a differing supply of driftwood, although it is thought that because food would be limited, search activity for this resource would increase as a result.

In 1995, we undertook a further, more extensive survey of strandline along the Sefton Coast from Hightown to Southport, a distance of 14 km, turning every piece of driftwood and manmade material in search of the woodlouse. We found that *A. album* occurred under almost every piece of driftwood, and to a lesser extent under other materials, on accreting dunes usually in association with *Orchestia* spp

(Amphipoda) and *Porcellio scaber* Latreille 1804 (Isopoda). However, the woodlouse was absent on all eroding dunes where embryo dunes were not able to form, even if drift material was present.

Where mechanical beach cleansing was found to be in operation at potential *A. album* sites on accreting embryo dunes, *A. album* was absent apparently due to lack of driftwood. However, where chestnut paling was used to define a beach area on accreting dunes, this fence restricted access by the beach cleaner, thus jetsam and litter were allowed to accumulate. In these areas *A. album* was found to inhabit all available sites.

DISCUSSION

It seems clear that *A. album* moves only small distances away from its driftwood habitat during the night, despite a more favourable level of humidity during this period. Thus, populations of *A. album* can be described as isolated because of their sedentary nature, which results in considerable differences in population structure (Vader & de Wolf 1988). Although *A. album* can colonize new areas by passive dispersal, often just clinging onto drifting material during storms (Vader & de Wolf 1988), much is left to chance. The removal of habitat by beach cleaning increases the likelihood that a colonizing population will not survive due to an absence of food and habitat. Llewellyn & Shackley (1996) observed reductions in the populations of Coleoptera, Diptera and Amphipoda where cleaning had occurred, and concluded that beach cleaning had a deleterious effect on the strandline species diversity and population abundance. In this instance of *A. album*, driftwood is essential for its survival and distribution around the coasts of Britain (Harding & Sutton 1985) and our results concur with Llewellyn & Shackley (1996) that cleaning is damaging.

When advising on management of the characteristic and often specialized strandline faunal communities, Kirby (1992) recommends a non-interference strategy. Llewellyn & Shackley (1996) believe this is where conflict arises: local authorities are under increasing pressure, inspired by the incentive to obtain the Blue Flag Seaside Award, to improve conditions on their beaches. The determination to clean up beaches to such high standards as those set out in the Seaside Award Criteria Guidance Notes usually antagonizes conservation interests.

Proposals that involve a compromise by both parties, are something that we advocate in the light of our results. The need for cleaning the popular stretch of beach between Ainsdale and Southport is no doubt necessary for tourism during summer months. However, in line with Llewellyn & Shackley's (1996) recommendations, we also suggest seasonal, selective hand removal of smaller, more unsightly manmade materials leaving just large pieces of driftwood to retain some habitat for *A. album*. Alternatively, railway sleepers could be secured permanently at the strandline, whilst also remaining attractive and in keeping with the resort.

ACKNOWLEDGEMENT

We would like to express our thanks to Chris Felton (Entomology Section, Liverpool Museum) for sharing his thoughts on the status and ecology of this woodlouse.

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SHORT COMMUNICATION

A Recent Record of *Oedemera virescens* (L.) (Coleoptera: Oedemeridae) in Gloucestershire.—This extremely scarce beetle is listed in the *Review of the Scarce and Threatened Coleoptera of Britain* (Hyman & Parsons, 1992) as RDB2, vulnerable, and it would appear that most recent records come from north-east Yorkshire. It has, however, been recently collected from three sites in south-west Scotland (Morris, 1997). I collected this species in the Forest of Dean, where it had previously been recorded, near Staunton (SO563121) on 26.v.90. I recently re-examined the specimen, which is deposited in my personal collection, comparing it with specimens in the collections of the National Museum of Wales, Cardiff, and by referring to the underside characters figured by Vázquez (1993). Although certain that it was indeed a female *Oedemera virescens*, I asked Dr Brian Levey for a second opinion, and he kindly confirmed my identification. The ecology of the species is given as “broad-leaved woodland, pasture woodland and wood edges. Larval biology unknown but probably associated with dead wood” (Hyman & Parsons, 1992). Vázquez however, gives the following as possible larval foodplants: *Senecio jacobaea*, *Aconitum napellus*, *Typha*, *Helianthus tuberosus* and *Eupatorium*, the larvae being found in the stems. My specimen was caught by sweeping along a ride in mixed woodland, where certainly the dominant plant was *Senecio* sp. with *Eupatorium* and *Hypericum* to a lesser extent. This perhaps lends some weight to the assertion of Vázquez that larvae are found in plant stems and not in dead wood. It would appear that this species has a long history in the Forest of Dean and no doubt has occurred there in low numbers since it was first recorded by E. W. Morse in 1905 and again in 1913 (records in Atty, 1983). I have revisited the site on a number of occasions since 1990, but have not yet found it again.—P. M. PAVETT. Dept. of Biodiversity and Systematic Biology, National Museums and Galleries of Wales, Cathays Park, Cardiff CF1 3NP.

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ANNUAL EXHIBITION 1997

1997 ANNUAL EXHIBITION

Imperial College, London SW7—25 October 1997

The following account of exhibits has been compiled by A. M. Jones (British butterflies), G. A. Collins (British Macrolepidoptera), D. J. L. Agassiz (British Microlepidoptera), N. M. Hall (Foreign Lepidoptera), P. J. Chandler (Diptera), P. J. Hodge (Coleoptera), M. R. Wilson (Hemiptera), A. J. Halstead (Hymenoptera and other orders), R. Dyke (illustrations). The photographs for the two colour plates were taken by D. E. Wilson and the cost of printing these plates was met by a grant from the Hammond Memorial Fund.

BRITISH BUTTERFLIES

BAILEY K. E. J.—A range of aberrations showing the exhibitor's continuing work with the effects of temperature and changing photoperiods on larvae and freshly formed pupae. From cold shock, a female *Colias croceus* Geoffroy ab. *pseudomas* Cockerell and a male *Colias alfacariensis* Berger with increased melanic borders. *Ladoga camilla* L. ab. *latealba* Verity and ab. *nigrina* Weymer (also subjected to late larval photoperiod change), *Cynthia cardui* L. extreme ab. *rogeri* Meilhan, one having a heavily melanic underside (Plate V, Fig. 11), and *Eurodryas aurinia* Rott. intermediate and extreme ab. *sebaldis* Shultz. From heat shock, a male *Apatura iris* L. approaching ab. *iolata* Cabeau and an extreme melanic *E. aurinia* (Plate V, Fig. 5) which resulted from an escaped larva pupating in a sunny part of a greenhouse during a heat wave. A series of confluent and light melanic *Clossiana dia* L. which had been subjected to prepupal heat shock and pupal cold shock.

Two short series of the genetically recessive ab. *atratus* Bailey of *E. aurinia* comparing the 'typical' examples with the F₂ from a male heterozygous *atratus* and a female of the Spanish subspecies *beckeri* H.-S. showing the diluted expression of *atratus* in the hybrids.

Particularly interesting was an experiment in interspecific hybridization between *Apatura iris* and *Apatura ilia* f. *clytie* D. & S. Male *iris* were hand paired with female *ilia* and from these about 100 ova were laid; many coloured up but only 15 hatched and only 3 commenced feeding and 1 survived the first moult. This developed quickly but pupated prematurely in the fourth instar; the pupation process was assisted as the skin was not fully cast. A small male hybrid emerged ten days later.

Also shown were bred homoeotic specimens of *Colias alfacariensis*, *Eurodryas aurinia* and *Apatura iris*.

BEAUMONT, H. E.—An extreme *Aglais urticae* L. ab. *conjuncta* Neuberg (Plate V, Fig. 7), captured at sedum flowers amongst dozens of typical specimens in the exhibitor's garden at West Melton, Rotherham, S. Yorks.

PLATE V ANNUAL EXHIBITION 1997

| | | |
|----|---|----|
| 1 | 2 | 3 |
| | 4 | 5 |
| 6 | | 7 |
| 8 | | 9 |
| 10 | | 11 |

- 1: *Coenonympha pamphilus* ab. *alba*, Ashdown Forest, E. Sussex, 22.vii.56, R.C. Dennis.
- 2: *Aphantopus hyperanthus* ab. *pallens*+ab. *caeca*, Wilts, bred F₄, June 1994, M. Callow.
- 3: *Quercusia quercus*, homeotic, bred, Surrey, 16.vi.97, A.M. Jones.
- 4: *Vanessa atalanta*, ab. *millierei*, Ilkley Moor, West Yorks, 7.ix.97, D. & M. Leather.
- 5: *Eurodryas aurinia*, extreme melanic, bred, vi.1997, K.E. J. Bailey.
- 6: *Boloria selene*, ab. *nigricans*, temperature shock to pupae, bred 25.v.97, P. Tebbutt.
- 7: *Aglais urticae*, extreme melanic, West Melton, Rotherham, S. Yorks, 17.ix.97, H.E. Beaumont.
- 8: *Aphantopus hyperanthus*, ab. *lanceolata*, upperside, bred F₄, Sussex, 1997, A. S. Harmer.
- 9: *Aphantopus hyperanthus*, ab. *lanceolata*, underside, bred F₂, Sussex, 1997, A. S. Harmer.
- 10: *Pieris rapae*, female, ab. *fuscata*, Northants, 5.ix.97, P. Horsnail exhib. P. Tebbutt.
- 11: *Cynthia cardui*, extreme melanic, underside, cold shock, bred, x.1996, K.E. J. Bailey.

CALLOW, M.—A bred series of *Aphantopus hyperantus* L. ab. *pallens* Schultz. including combined examples with ab. *arete* Müller and ab. *caeca* Fuchs (Plate 1, Fig. 2). These emerged unexpectedly in the F₄ generation from an *arete* female. The brood consisted of 76 specimens, 14 *pallens*, 13 *arete*, 7 *pallens* + *arete*, 1 *pallens* + *caeca* and 41 completely typical.

DENNIS, R. C.—Examples of *Coenonympha pamphilus* L. taken during the past forty years by the exhibitor and the late R. C. Griffiths showing some of the aberrational forms that can occur; these included ab. *caeca* Ober., ab. *brumescens* Leeds, ab. *postexcessa* Leeds, and the rare ab. *alba* Pruffer taken at Ashdown Forest, E. Sussex, 22.vii.1956 (Plate V, Fig. 1).

Argynnis paphia L. f. *valesina* Esper, a short series showing graduated ground colour variation from whitish-yellow, ab. *valesina-alba* Reuss, to the dark form ab. *valesina-miranda* Fischer (taken July 1997).

FENSOME, B.—A selection of specimens taken or bred in 1997 including *Lysandra coridon* Poda ab. *ultrafowleri* B. & L. and ab. *khaki* B. & L., *Maniola jurtina* L. ab. *nigrianira* Johnstone and *Anthocaris cardamines* L., a mixed gynandromorph captured in the exhibitor's hands whilst walking his dog. A short series of *Lycaena phlaeas* L. included a darkly suffused specimen.

HARMER, A. S.—The results of breeding from a female *Aphantopus hyperantus* L. ab. *lanceolata* Shipp taken in 1995, a wild male *lanceolata* having been introduced into the F₁ pairings. The resulting F₂ consisted of 91 typical males, 104 typical females, 48 male and 40 female *lanceolata*. The *lanceolata* showed considerable variation with some also being ab. *crassipuncta* Burkhardt (Plate V, Figs 8 & 9). Other aberrations from the F₁ and F₂ included an ab. *cristopharis* Collier.

Also exhibited was a bred female *Lycaena dispar batavus* Oberthür with the median spots almost fused with the terminal fascia. A short variable series of *Lysandra coridon* Poda ab. *fowleri* South, bred in the F₂ from a male *fowleri* paired to a typical female.

HOLLOWAY, J. & LEES, D.—An interesting exhibit showing photographs and living larvae of the Geranium Bronze *Cacyreus marshalli* Butler. The larvae feeding on *Geranium pyrenaicum* Burm.; these were taken as ova following observations of females ovipositing at Kingston near Lewes, E. Sussex. A detailed account was given of observations on 8–10 specimens between 21.ix.97 and 10.x.97.

This lycaenid is a resident of South Africa; it was accidentally introduced to Mallorca in 1989 on imported plants; it has spread to other Balearic islands and become a pest. One was found in a garden in Belgium in 1991.

JONES, A. M.—*Quercusia quercus* L. Two female ab. *obsoleta* Tutt lacking the usual purple patches on the upperside, one set as an underside showing homeosis with black upperside scaling on all four wings and legs (Plate V, Fig. 3). Two underside aberrations, a male ab. *anti-infraobscura* Goodson lacking the "bands" to the forewings and a female with similar forewings but ab. *latefasciata* Courv. hindwings. All reared June 1997. An extreme melanic male *Eurodryas aurinia* Rott. bred May 1997 from stock bred in captivity for 5 years. A male *Argynnis paphia* L. ab. *confluens* Spuler, captured in Surrey, 14.vii.97.

LEATHER, D. & M.—An example of the very rare ab. *millierei* Cabeau of *Vanessa atalanta* L. (Plate V, Fig. 4), taken at Ilkley Moor, W. Yorks, 7.ix.97.

PARKER, M.—A lightly marked male *Boloria selene* D. & S. taken with similarly marked specimens on 10.vi.97 at Blaen-y-cwm, Mynydd du forest, Gwent.

PORTER, J.—A female *Pieris brassicae* L. with reduced black hindwing scaling on the underside, Surrey 31.viii.97. Two female *Polyommatus icarus* Rott. showing

extremes of blue scaling, ab. *caerulea* Fuchs, Surrey, 29.v.91 and a brown example from Kent, 1.viii.97.

REID, I.—An example of *Celastrina argiolus* L. ab. *aquilina* Grund, taken 22.vii.97, and an extreme albino female *Maniola jurtina* L. ab. *cinerea* Cosmovici, taken 23.vii.97. The capture of the *argiolus* prompted a second visit to the site the next day with the resulting capture of the *jurtina*. The *jurtina* population was very small with a maximum count of 13 specimens.

REVELS, R. C.—The first part of the exhibit comprised wild caught aberrations including a fine *Maniola jurtina* L. bilateral gynandromorph, taken on 6.vii.97 from a small colony in Beds., only 20 typical specimens being seen during the course of the day. A *Ladoga camilla* L. ab. *nigrina* Weymer, one of two seen on the 14.vii.97 and possibly the first record for Beds. since 1955. A *Gonepteryx rhamni* L. ab. *pallida* Hannemann, a male taken on 23.vii.97 with pale female-looking ground colour. Two *Pieris rapae* L., an ab. *fasciata* Tutt and an ab. *flava* ter Haar, both taken from a population of 4–5000 nectaring on knapweed flowers in a Beds. woodland, viii.97. A male *Lysandra coridon* Poda ab. *fowleri* South and a female ab. *semisyngrapha* Tutt, both north Chilterns, viii.97.

The second part of the exhibit consisted of breeding experiments. *Aricia agestis* D. & S. ab. *glomerata* Tutt, from a female taken vii.96; the F₁ comprised 11 type and 7 *glomerata*. A pairing from *glomerata* parents resulted in only two small specimens in the F₂, both *glomerata*, showing a likely dominant gene; however, more comprehensive breeding would be needed to prove this. *Polyommatus icarus* Rott. ab. *radiata* Courv., further breeding including crossing with the ab. *basilongata* B. & L. gene from the stock of the late Les Young; this gave a result of 50% *basilongata* and 100% *radiata*. Selected pairings produced combined forms. *Aphantopus hyperantus* L. ab. *lanceolata* Shipp, an example reared from the A. S. Harmer stock; 7 *lanceolata* and 21 typical specimens emerged in the F₂.

ROUSE, T.—A bred female *Lycaena dispar batavus* Oberthür with bleaching to the right forewing. A pair of *Argynnis adippe* D. & S., bred in the F₄ generation from a Dartmoor female; both had heavy upperside spotting, (Plate V, Fig. 15).

STOKES, D.—The results of chilling freshly formed pupae. *Argynnis paphia* L., a male and female ab. *confluens* Spuler, the female also being f. *valesina* Esper. *Thecla betulae* L., examples with a reduction to the width of the underside forewing bands and an increase in the width of the hindwing bands.

SWIFT, S & WALKER, D.—An example of the South American lycaenid, *Chlosostrymon tela* Hewitson, found by Mr and Mrs Creese indoors at their home in Bishop Waltham on 7.iii.97 in fresh condition; this was subsequently photographed by G. Small and passed to the exhibitors on the 9.iii.97, badly worn. It was identified by Martin Honey of the National History Museum, London, and is presumed to be an accidental import.

TEBBUTT, P.—Amongst specimens caused by temperature shock to freshly formed pupae, the highlight was a very extreme, almost completely black ab. *nigricans* Oberthür of *Boloria selene* D. & S. (Plate V, Fig. 6), bred 25.v.97 following a combination of heat and cold shocks; another similarly treated specimen only showed minor increases in the black markings. Other species included *Ladoga camilla* L. ab. *obliterae* Robson and Gardner and ab. *nigrina* Weymer from cold shock. *Nymphalis polychloros* L. ab. *postnigrescens* Lempke, ab. *testudo* Esper and an unnamed aberration with a black costal blotch to the forewings but lacking black markings to the rest of the wing areas, from heat shock. *Aglais urticae* L. ab. *semiichnusoides* Pronin and ab. *nigricaria* Lambillion showing the difference between these two aberrations (*nigricaria* having darker hindwings and no blue lunules) also

from heat shock. *Inachis io* L. an ab. *teliodes-clara* with an orangey ground colour and a series of ab. *fischeri* Standfuss from long cold treatment.

Other bred specimens included *Hamearis lucina* L. with a whitish ground colour to the forewings. *Lycaena phlaeas* L. with reduced spotting ab. *parvipuncta* Tutt and ab. *oblitera* Scudder, also an example of the rare ab. *bipunctata* Tutt bred some years ago.

Amongst wild caught specimens were three extreme ab. *obliterae* of *L. camilla*, Northants, vii.97. An *A. urticae* with extreme black forewings from Northants. A pair of *Melanargia galathea* L. ab. *valentini* Williams from the Cotswolds. A most interesting *Pieris rapae* L. ab. *fusca* Tatchell and Riley (Plate V, Fig. 10) with a mid brown ground colour. This was caught by P. Horsnail in a Northants front garden on 5.ix.97; it was kept alive for five days but failed to lay any eggs and a wild male refused to pair with it.

TREMEWAN, W. G.—Male and female examples of Irish *Polyommatus icarus* Rott. ssp. *mariscolore* Kane from various localities in the Burren, Co. Clare, 6–14.vii.97.

A female *Thymelicus sylvestris* Poda ab. *suffusa* Tutt from Cusgarne, near Redruth, Cornwall, 16.viii.97, the normal orange-fulvous coloration being suffused with dark brown on both the fore and hindwings.

BRITISH MACROLEPIDOPTERA

AGASSIZ, D. J. L.—*Dendrolimus pini* (L.), Guernsey, 4.viii.1996; *Hecatera dysodea* ([D. & S.]) two examples from Gravesend, Kent, 28.vi.1996, and 6.viii.1996—last seen in Britain in 1939 (Plate VI, Fig. 12). Examples of *Timandra griseata* (Peters.) and *T. comai* (Schmidt), two taxa split on the slenderest of grounds; should they prove to be genuine species then British examples will be largely *comai* although *griseata* may also occur.

BAKER, P. J.—From Thorpe, Surrey: *Xestia xanthographa* ([D. & S.]), immaculate example with darker central cross-band, 25.ix.1983; *Orthosia cruda* ([D. & S.]), melanic, 2.iv.1988. From West Hill, Devon: *Diarsia mendica* (Fabr.), wing shape and marking irregularities, 5 and 15.vi.1997; *Drymonia ruficornis* (Hufn.), pale form, 3.v.1997; *Ochropleura plecta* (L.), a dwarf with wingspan 21 mm., 4.ix.1996; *Ecliptopera silaceata* ([D. & S.]), 10.vii.1996; *Eupithecia dodoneata* Guen., 2.v.1997; *Eupithecia abbreviata* Steph., iii.1997; *Gymnoscelis rufifasciata* (Haw.), 18.vii.1996 and 10.iii.1997. From Hawkerland, Devon: *Epirrhoe alternata* (Müller, O. F.), aberration, 4.viii.1997.

BATTEN, A. K.—*Cerapteryx graminis* (L.), an aberration with the antler mark greatly extended, Dalwhinnie, Easterness, 11.viii.1997 (Plate VI, Fig. 4).

BRITTON, M.—*Psodos coracina* (Esp.), Drummochter Pass, Inv., 5.vii.1997, and Glen Tilt, Perth., 11.vii.1997. *Chesias rufata scotica* (Richardson), Killiecrankie, Perth., 6.vii.1997. *Aricia artaxerxes artaxerxes* (Fabr.), Glen Tilt, Perth., 10.vii.1997. *Epirrhoe rivata* (Hb.), Thirsk, Yorks., 22.viii.1997. *Nycteola revayana* (Scop.), reared from larva on oak, Dunnington, Yorks., 16.vi.1997.

CLANCY, S. P.—Moths from the Dungeness, Kent, area taken in 1997: *Drepana curvatula* (Borkh.), Dungeness, 11.viii.1997; *Hyles euphorbiae* (L.), Dungeness, 12.vi.1997; *Polia bombycina* (Hufn.), continental form, Lydd, 13.vi.1997; *Trachea atriplicis* (L.), Greatstone, 14.vii.1997; *Xanthia ocellaris* (Borkh.), Dungeness 1.x.1997; *Photodes extrema* (Hb.), Greatstone, 5.vi.1997; *Minucia lumaris* ([D. & S.]), Littlestone, 4.vi.1997; *Syngrapha interrogationis* (L.), Lydd, 21.vii.1997; *Parascotia fuliginaria* (L.), Greatstone, 11.viii.1997. Also: *Rheumaptera cervicalis* (Scop.), a short series bred from a female taken at Lydd, 8.viii.1996; *Pechipogo*

plumigeralis (Hb.), a female, Rye Harbour, E. Sussex, 25.viii.1997, and two examples bred from this specimen; *Semiothisa alternaria* (Hb.), melanics from Greatstone, 1.vii.1997 and 10.viii.1997 (Plate VI, Fig. 9), *Ourapteryx sambucaria* (L.), a second brood example with extensive dark scaling, Lydd, 29.ix.1997; *Hadena perplexa* ([D. & S.]), aberration from Dungeness, 6.vi.1997.

CLARKE, J.—Lepidoptera taken or bred in 1997, including: *Heliothis virescens* (Hufn.), Lakenheath, Suff., 11–13.vi.1997; *Mythimna turca* (L.), Bodmin Moor, Corn., 15.vii.1997; *Athetis pallustris* (Hb.), Saltfleet, Lincs., 7.vi.1997; *Orthosia gracilis* ([D. & S.]), red form from Borth Bog, Card., 8.iv.1997; *Callimorpha dominula* (L.), extreme aberration reared from one of four larvae, Leckford, Hants (Plate VI, Fig. 13); *Archanara algae* (Esp.), Lingfield, Surrey, 8.viii.1997; *Luperina nickerlii gueneei* Doubl., Newborough Warren, Angl., 18.viii.1997. A series of bred and wild taken examples of *Acrionicta tridens* ([D. & S.]) and *A. psi* (L.), demonstrating that accurate determination of adults can only be made by dissection.

COOK, R. R.—Lepidoptera taken or bred in 1997, including: *Eupithecia insigniata* (Hb.), Ashleworth, Glos., 3.v.1997; *Synanthedon formicaeformis* (Esp.), Lychett Minster, Dorset, reared from larvae found 7.iv.1997; *Diaphora mendica* (C1.) f. *rustica* (Hb.), bred from a female taken at Burrin, Co. Galway, 5.vi.1996; *Meganola albula* ([D. & S.]), Martin Down, Hants, 6.vii.1997; *Athetis pallustris* (Hb.), Saltfleet, Lincs., 7.vi.1997; *Euxoa obelisca grisea* (Tutt), Poole Harbour, Dorset, 9.viii.1997; *Epione paralellaria* ([D. & S.]), reared from larvae from Strensall Common, Yorks., vi.1997; *Perconia strigillaria* (Hb.), Strensall Common, Yorks., 9.vi.1997.

COX, W.—Lepidoptera recorded at Aviemore, 3–7.viii.1997, including *Alcis jubata* (Thunb.), *Eugnorisma depuncta* (L.), *Enargia paleacea* (Esp.), and *Apamea zeta assimilis* (Doubl.).

CRONIN, A. R.—*Callimorpha dominula* (L.), an example of a small strain from Cothill, Oxon., and an example of ab. *medionigra* Cockayne from captive stock.

DAWSON, J.—*Parascotia fuliginaria* (L.), Bayford, Herts., 19.vii.1997. Moths from Cambs. (VC29): Devil's Dyke, *Mesotype virgata* (Hufn.), 6.vii.1997; and from Fulbourn—*Idaea vulpinaria atosignaria* Lempke, 10.vii.1997; *Catarhoe rubidata* ([D. & S.]), 13.vi.1997; *Lithostege griseata* ([D. & S.]), 26.v.1997; *Euxoa tritici* (L.), 16.viii.1997; *Spaelotis raveda* ([D. & S.]), 2.viii.1997; *Cucullia absinthii* (L.), 8.vii.1997; *Xanthia ocellaris* (Borkh.), 1.x.1997; *Acrionicta alni* (L.), 17.v.1997; *Simyra albovenosa* (Goeze), 26.vii.1996; *Celaena leucostigma* (Hb.), 9.viii.1997; *Archanara dissoluta* (Treit.), 23.vii.1997; *Heliothis virescens* (Hufn.), 26.vii.1997; *Tyta luctuosa* ([D. & S.]), 23.vii.1997; *Hypena rostralis* (L.), 8.ix.1997.

DOBSON, A. H.—Three examples of *Eupithecia ultimaria* (Boisd.), reared from larvae found on Tamarisk, south Hampshire coast, 7.vii.1997. Second brood larvae found there on 16.ix.1997.

EMMET, A. M.—*Cosmia diffinis* (L.), Saffron Waldon, Essex, 8.viii.1997—believed to be the first Essex record for over ten years.

HALL, N. M.—*Idaea vulpinaria atosignaria* Lempke from Earley, Berks, 13 and 15.vii.1997, Portland, Dorset, 21.vii.1997, and from Spain. Not listed by Baker for VC22, but recorded there first near Pamber, 1996, by G. Dennis. *Arenostola phragmitidis* (Hb.), Avon Valley nature reserve, Wilts., 11.viii.1997. *Xestia rhomboidea* (Esp.) from Hartslock nature reserve, Oxon. *Mythimna vitellina* (Hb.), a series bred from a female taken at Hastings Country Park, 13.x.1996, showing colour variation due to temperature. *Chloroclysta siterata* (Hufn.), bred from female, Earley, Berks, 18.iv.1997. *Eupithecia denotata* (Hb.), bred from seeds of Nettle-leaved Bellflower from Selborne, Hants, 13.viii.1996. Examples of major forms of *Biston betularia* (L.), bred from a typical female mated with a melanic male.

HARMAN, T. W.—On behalf of Mr B. Matlock, moths from Beltinge, Herne Bay, Kent: *Xylota exsoleta* (L.), 19.i.1997; and *Agrotis ipsilon* (Hufn.), 4.iii.1997.

HAYWARD, R. Moths taken or bred in 1996–7. 1996 migrants: *Orthonama obstipata* (Fabr.), Slough, Berks., 9.viii.1996; *Eurois occulta* (L.), Slough, Berks., 30.viii.1996; *Spodoptera exigua* (Hb.), Plymouth, Devon, 3.viii.1996, and Black Park, Bucks, 10.viii.1996; *Heliothis peltigera* ([D. & S.]), Black Park, Bucks., 8.vi.1996. Moths from a Slough, Berks., garden: *Cyclophora linearia* (Hb.), 7.viii.1997; *Idaea vulpinaria atosignaria* Lempke, 19.vii.1996; *Chloroclysta siterata* (Hufn.), 12.x.1996; *Eupithecia venosata venosata* (Fabr.), 26.v.1997; *Epione repandaria* (Hufn.), 19.ix.1997; *Paradarisa extersaria* (Hb.), 21.v.1997; *Ptilodontella cucullina* ([D. & S.]), 9.viii.1997; *Dichonia aprilina* (L.), 6.x.1997; *Parastichtis suspecta* (Hb.), 27.vii.1996; *Celaena leucostigma leucostigma* (Hb.), 16.viii.1996; and *Parascotia fuliginaria* (L.), 18.vii.1997. Also: *Cymatophorina diluta hartwegi* (Reiss.) ab. *nubilata* Robs., Black Park, Bucks., 5.ix.1997; *Serraca punctinalis* (Scop.) ab. *humperti* Hump., bred from female, Black Park, Bucks., 1996; *Agrotis puta* (Hb.), halved gynandromorph, Slough, Berks., 5.viii.1997; *Mormo maura* (L.), Slough, Berks., 26.x.1996; *Earias clorana* (L.), Black Park, Bucks., 3.vii.1997.

HENWOOD, B.—Lepidoptera from Devon, 1997: *Synanthedon tipuliformis* (C1.), reared from larva on Black Currant, Abbotskerswell; *Bembecia scopigera* (Scop.), Slapton, 4.vii.1997; *Perizoma bifaciata* (Haw.), Abbotskerswell, 18.viii.1997; *Lampropteryx otregiata* (Metc.), Dartmoor, 9.v.1997; *Opisthograptis luteolata* (L.), an aberration with almost white ground colour, Abbotskerswell, 29.iv.1997. From Scotland, 27.vii–9.viii.1997, species including: *Perizoma taeniata* (Steph.), Loch Ness; *Perizoma blandiata blandiata* ([D. & S.]), Kincaig; *Apamea furva britannica* Cockayne, Kincaig; *Amphipoea crinanensis* (Burr.), Kincaig.

HEPPENSTALL, R. I.—*Hyloicus pinastri* (L.), one of two examples taken at Rossington, S. Yorks., 29.vii–8.viii.1997—new to VC63.

HOWARD, R.—An extreme aberration of *Arctia caja* (L.), Lizard, Corn., 10.viii.1996 (Plate VI, Fig. 11).

JENKINS, A.—Lepidoptera taken in 1997, including: *Adscita globulariae* (Hb.), Kent; *Brachionycha nubeculosa* (Esp.), Loch Rannoch and Aviemore; *Trichopteryx carpinata* (Borkh.) ab. *fasciata*, Newtonmore; *Minoa murinata* (Scop.), Forest of Dean; *Synanthedon vespiformis* (L.), Hyde Park; *Semiothisa notata* (L.), Bramble Wood, Devon.

KNILL-JONES, S. A.—A selection of Lepidoptera from the Isle of Wight, including: *Cleorodes lichenaria* (Hufn.), Freshwater, 17.vii.1997; *Archiearis parthenias* (L.) and *A. notha* (Hb.), Whitefield Woods, Ryde, 21.iii.1997; *Elaphria venustula* (Hb.), Cranmore, 13.vi.1997; *Eupithecia fraxinata* Crewe, Cranmore, 10.vii.1997; *Idaea vulpinaria atosignaria* Lempke, Freshwater, 17.vii.1997; *Mythimna unipuncta* (Haw.), Freshwater, 9.iii.1997; *Rhodometra saccharia* (L.), Freshwater, 16.viii.1997; *Idaea degeneraria* (Hb.), Freshwater, 11.viii.1997; *Cryphia algae* (Fabr.), Freshwater, 21.viii.1997; *Mythimna vitellina* (Hb.), Freshwater, 28.viii.1997; *Euplagia quadripunctaria* (Poda) ab. *lutescens* Stgr., Freshwater, 18.viii.1997; *Eupithecia ultimaria* Boisdu., reared from a larva on Tamarisk, Bembridge, 13.ix.1997—new to VC10.

KOLAJ, A.—Moths taken in Scotland during April and August 1997: *Brachionycha nubeculosa* (Esp.), common around Aviemore; *Lycia lapponaria scotica* (Harr.), rare, only four males found; *Paradarisa sobrina* (Dup.), *Eugnorisma depuncta* (L.), and *Gnophos obfuscata* ([D. & S.]), common around Aviemore; *Carsia sororata anglica* Prout, local; *Euxoa cursoria* (Hufn.), *Actebia praecox* (L.), and dark forms of *Noctua comes* Hb., Findhorn Sandhills, Elgin. Other moths taken in 1997: *Calamia tridens occidentalis* Cockayne, Kilnaboy, Co. Clare, 3–7.viii.1997; *Eriopygodes*

imbecilla (Fabr.), Cwmtillery, Mon., 5.vii.1997; *Hadena luteago barrettii* (Doubl.), reared from pupae, Lizard, Corn., x.1996; *Aplocera efformata* (Guen.), aberrations taken at Coventry, Warks., 18.v.1997; *Tyria jacobaeae* (L.), an aberration with yellowish coloration, Coventry, Warks., 18.v.1997, taken by the exhibitor's daughter.

LANGMAID, J. R.—*Hydrelia sylvata* ([D. & S.]), ab. *goodwini* Banks from Rewell Wood, Sussex, 30.v.1997. *Hyles gallii* (Rott.), Southsea, Hants: at mvl 20.vii.1997. *Ctenoplusia limbirena* (Guen.), Southsea, Hants, at mvl 10.vi.1997—new to Hampshire.

MARTIN, G.—A selection of moths captured at actinic light in a second-floor window in urban Camberwell (Surrey) including: *Euproctis chrysorrhoea* (L.), 29.vi.1993; *Cucullia umbratica* (L.), 7.vii.1992; *Aporophyla nigra* (Haw.), 22.x.1995; and *Heliothis peltigera* ([D. & S.]), 17.x.1994. Moths from Barn Elms Surrey: *Agrotis puta* (Hb.), halved gynandromorph, 5.viii.1997; *Apamea oblonga* (Haw.) 7.viii.1997—new to Surrey.

MCCORMICK, R.—Interesting moths (often using substitute specimens) from Devon, 1997, including: *Hepialus fusconebulosa* (DeG.), Bellever Forest, Dartmoor, 28.vi.1997; *Zeuzera pyrina* (L.), Great Plantation 15.vii.1997; *Eriogaster lanestris* (L.), larvae seen at Ottery St. Mary, 22.vi.1997; *Malacosoma castrensis* (L.), Axmouth Saltings, 1997; *Scotopteryx bipunctaria cretata* (Prout), "seen" at Exeter by M. Meehan, vii.1997; *Chloroclystis chloerata* (Mab.), larvae found near Lyme Regis (Devon side), 12.iv.1997; *Venusia cambrica* Curt., "seen" at Fernworthy Reservoir, Dartmoor, 23.vii.1997; *Semiothisa notata* (L.), West Hill, 21.v.1997 (by P. J. Baker); *Biston betularia* (L.) f. *carbonaria* Jordan, Bramble Wood, 17.vi.1997; *Clostera pigra* (Hufn.), larva "seen" on Sallow at Tipton St. John by M. Meehan, 8.vi.1997; *Clostera curtula* (L.), Colaton Raleigh Common, 26.vii.1997 (by D. Gibbs); *Spilosoma urticae* (Esp.), Exminster Marshes, 5.vii.1997; *Hadena albimacula* (Borkh.), Beer Head, 4.vi.1997; *Mythimna pudorina* ([D. & S.]), Bramble Wood, Okehampton, 13.vi.1997, and Colaton Raleigh Common, 26.vii.1997; *Xylena vetusta* (Hb.), larvae "seen" by M. Meehan, Tipton St. John, 8.vi.1997. Moths from Scotland, 9–15.viii.1997, including: *Plemyria rubiginata plumbata* (Curt.); *Aplocera plagiata scotica* Richardson, Dalwhinnie, 10.viii.1997, and Feshiebridge, 12.viii.1997; and *Amphipoea crinanensis* Burr., confirmed by dissection. Varieties: *Cyclophora linearia* (Hb.), Park Hill, New Forest, 29.vii.1997 (Plate VI, Fig. 10); and *Chloroclystis rectangulata* (L.), Dawlish, 6.vi.1997 (Plate VI, Fig. 14). [It is to be greatly regretted that voucher specimens were apparently not retained for some of these records which are important in a Devon context, GAC.]

MIDDLETON, H. G. M. AND SCANES, J. T.—From the west coast of Ireland: *Eupithecia venosata plumbea* Huggins, reared from larvae on *Silene uniflora* collected in 1966. From the Norfolk Broads, vi.1997: *Senta flammea* (Curt.), *Phragmataecia castaneae* (Hb.), *Furcula bicuspid* (Borkh.), *Orthonama vittata* (Borkh.), and *Hyles gallii* (Rott.), 6.vi.1997. From Mildenhall, Suff., vi.1997: *Heliothis virescens* (Hufn.) and *Lithostege griseata* ([D. & S.]), by day; *Noctua orbona* (Hufn.) and *Sideridis albicolon* (Hb.), at mvl. From Lizard, Corn.: *Polymixis xanthomista statices* (Gregs.), 7–9.ix.1997; and *Eilema caniola* (Hb.), 8.ix.1997.

NATURAL HISTORY MUSEUM—Two drawers of macrolepidoptera from the National Collection. The first contained historic examples of scarce immigrant species including: *Calophasia platyptera* (Fabr.), near Brighton, Sussex, 1896; *Lithophane lamda* (Fabr.), Ranworth, Norf. 1877. *Ochropleura flammata* ([D. & S.]), Cromer Lighthouse, Norf., 1875; *Catephia alchymista* ([D. & S.]), Deal, Kent, 1900; and *Notodonta torva* (Hb.), north Norf., 1883. The second drawer contained species that are considered to be dubiously British or are accidental importations, including: *Syntomis*

phegea (L.), Folkestone, Kent, 1872; *Plathypena scabra* (Fabr.), Lee, Kent, 1956; *Graphania dives* (Philpott), Spurn Head, Yorks., 1950; *Scotopteryx moeniata* (Hb.), Sandburn, Yorks., 1866; *Euchromia lethe* (Fabr.), Truro, Corn., 1953; and the Purple-barred Yellow which was found to be a mixed series of *Lythria purpuraria* (L.), from Braemar and Essex, and *L. cruentaria* (Hufn.), from Essex.

OWEN, J.—Aberrations of moths taken at Dymchurch, Kent: *Spilosoma lubricipeda* (L.), 29.viii.1997 (Plate VI, Fig. 5); *Eulithis pyraliata* ([D. & S.]), 17.vii.1997; *Opisthograptis luteolata* (L.), 11.viii.1995; *Epirrhoe alternata* (Müller, O. F.), 7.vi.1996; *Malacosoma neustria* (L.), 9.viii.1991 and 14.vii.1994; *Idaea dimidiata* (Hufn.), 30.vi.1996; *Timandra griseata* (Peters.), 23.viii.1997.

PARSONS, M. S.—An exhibit comprising: *Scopula ornata* (Scop.), White Downs, Surrey, 29.v.1997; *Eupithecia virgaureata* Doubl., Beckley, E. Sussex, reared from a larva found 28.ix.1996; *Conistra erythrocephala* ([D. & S.]), Atherington, W. Sussex, at ivy blossom 25.x.1996; *Euphyia biangulata* (Haw.), Fairlight, E. Sussex, 9.viii.1997; *Simyra albovenosa* (Goeze), Fairlight, E. Sussex, 9.viii.1997; *Acrionicta aceris* (L.), a very dark example, Raynes Park, Surrey, 28.vi.1997; *Sedina buettneri* (Hering), Dorset, 27.ix.1997.

PORTER, J.—Examples of all three *Adscita* species taken in 1997. Aberrations taken in 1997: *Lacanobia suasa* ([D. & S.]), very dark examples, Glos., 3.v.1997; *Axylia putris* (L.), dark example, Chessington, Surrey, 12.vi.1997; *Aspitates ochrearia* (Rossi), with converging cross-lines on the forewing, Dungeness, Kent, 9.viii.1997; several *Mitochondria miniata* (Forst.) exhibiting varying ground colour, including ab. *flava* de Graaf, Thorpeness, Suff., 12.vii.1997.

PRATT, C.—Moths from Peacehaven, E. Sussex: *Luperina dumerilii* (Dup.), 3.ix.1997; *Hadena compta* ([D. & S.]), an extreme form with reduced white markings, 9.vii.1997; *Xanthorhoe fluctuata* (L.), an aberration with much reduced black markings, 26.vi.1996.

REDFERN, A.—*Xanthia ocellaris* (Borkh.), Wootton, I.o.W., 5.x.1997—new to VC10.

ROUSE, T.—Kentish moths including: *Abraxas sylvata* (Scop.), Densole, 3.viii.1997; *Enargia paleacea* (Esp.), Orlestone Forest, 14.vii.1997; *Pechipogo plumigeralis* (Hb.), Dungeness, 9.viii.1997; *Lacanobia contigua* ([D. & S.]), Folkestone Warren, 6–9.vi.1997; *Macroglossum stellatarum* (L.), at rest on a wall, Sandwich, 18.vi.1997; *Hyloicus pinastri* (L.), Orlestone Forest, probably resident here as many taken in 1997; *Agrius convolvuli* (L.), Densole, 28.viii.1997, and 7 and 8.x.1997; *Daphnis nerii* (L.), Densole, 1.ix.1997.

SHARPE, P.—Aberrations of British moths *Opisthograptis luteolata*, Church Cove, Lizard, Cornwall, 6.x.97. *Zygaena trifolii palustrella*, Edge Common, Glos., 20.vi.96. (Plate VI, Figs 1, 2).

SIMSON, E. C. L.—Aberrations of British Sphingidae, comprising *Laotloe populi* (L.), *Mimas tiliae* (L.), and *Hyloicus pinastri* (L.) (Plate VI, Fig. 16).

SKINNER, B.—On behalf of T. Rogers: a male *Ochropleura flammata* ([D. & S.]) taken at sugar at Eswick, Shetland, 28.vi.1997 (Plate VI, Fig. 7). On behalf of J. Hale and M. E. Hicks: a male *Agrotis crassa* (Hb.), one of three at light on St. Agnes, Scilly, 10.viii.1997; and a male *Ctenoplusia limbirena* (Guen), at light, St. Agnes, Scilly, 13.ix.1997.

SOFTLY, R. A.—An histogram showing catches of *Autographa gamma* (L.) in 1996 at Hampstead, Middx, large peaks on 8 June and 6 August possibly representing migration fronts.

STERLING, P. H.—Three species from Dorset (VC9): *Hadena albimacula* (Borkh.), reared from a larva on *Silene nutans* on the Purbeck coast found 15.vii.1996—

confirmation of residency in the county; *Sedina buettneri* (Hering), reared from a larva in *Carex acutiformis*, 27.vii.1997—the first record of this species being reared to the adult in Britain; on behalf of R. Eden, *Dysgonia algira* (L.) from West Bexington, 10.ix.1997 at actinic light.

SWIFT, S. AND WALKER, D.—*Meganola strigula* ([D. & S.]), New Forest, 21.vii.1997. Moths taken at Gosport, Hants.: *Scopula emutaria* (Hb), 28.vii.1997 and 24.viii.1997; *Catarhoe rubidata* ([D. & S.]), 26.vii.1997; *Camptogramma bilineata* (L.), 26.vii.1997; *Chloroclysta siterata* (Hufn.), 15.ix.1997; *Mythimna impura* (Hb.) with strongly marked forewings, 25.vii.1997; *Acronicta rumicis* (L.) melanic, 26.v.1997; *Nycteola revayana* (Scop.) at sugar, 16.vii.1997; *Callistege mi* (C1.), 9.vi.1997.

WEDD, D.—Specimens captured or bred in 1996–7. Series of the following bred through several generations: *Diaphora mendica* (C1.) f. *rustica* Hb., *Aspitates gilvaria burrenensis* Cock., and *Odontognophos dumetata hibernica* Forder all from Co. Clare; and *Eriopygodes imbecilla* (Fabr.) from south Wales. *Biston betularia* (L.) f. *insularia* Thierry-Mieg, Loch Rannoch, Perth., 26.v.1997. From Henley-on-Thames, Oxon.: *Archanara algae* (Esp.), 25.ix.1997; *Hypena obsitalis* (Hb.), reared from a larva on Pellitory-of-the-Wall.

WRIGHT, S.—Lepidoptera of Misson Training Area, Notts. Moth survey work, carried out on eight nights between 1991 and 1997, shows this area to be very important in a Nottinghamshire context. 192 species of macro-moth, and 76 species of micro were found, many of them rare or unknown elsewhere in Notts. Species exhibited included: *Perizoma sagittata* (Fabr.), *Anticollix sparsata* (Treit.)—new to Notts.; *Agrotis vestigialis* (Hufn.); *Mythimna pudorina* ([D. & S.]); *Enargia paleacea* (Esp.); and *Amphipoea fucosa paludis* (Tutt)—only Notts. record.

YOUNG, D.—Moths recorded in 1996 and 1997. From the New Forest, Hants: *Cossus cossus* (L.), at mvl 7.vi.1997; *Lithosia quadra* (L.), two males 14.vii.1997, a female 23.vii.1997; *Catocala promissa* ([D. & S.]), vii.1997, commonly at sugar and a few at mvl; *Ennomos quercinaria* (Hufn.), a variable series bred from a female taken in 1996. From Tilshead, Wilts.: *Polia bombycina* (Hufn.), common at mvl, vi.1997. From Drumguish, Inv.: *Orthosia gothica* (L.), a series bred from females taken vi.1996. From Kent: *Xanthia gilvago* ([D. & S.]), reared from larva on Wych Elm, iv.1997. From Benfleet, Essex: *Luperina nickerlii demuthi* Goater & Skinner, found commonly at rest and to light, 28.viii.1996.

BRITISH MICROLEPIDOPTERA

AGASSIZ, D. J. L.—*Argyresthia cupressella* Wals., a series from Suffolk, 28.vi. & 2.vii.1997 new to Europe; *Agonopterix curvipunctosa* (Haw.), reared from *Anthriscus caucalis*, Berrow, Somerset; *Margaritia sticticalis* (L.)? migrant taken at Gravesend 7.viii.96.

ALBERTINI, M. V.—*Maruca vitrata* (Fab.) [= *testulalis* (Geyer)] Burnham, Bucks. at M.V. 30.viii.97.

BAKER, P. J.—*Hypopsygia costalis* (Fab.) four specimens showing variation: confluent forewing markings, Thorpe, Surrey 28.viii.75, thin reddish scaling, Thorpe, 12.vii.86, yellow markings almost obsolete, West Hill, Devon 10.vii.96 & 25.vii.97.

BEAUMONT, H. E.—*Micropterix mansuetella* (Zell.) Stainton Wood, Doncaster, South Yorks, several swept 26.v.97 new to VC63; *Monopis monachella* (Hübner) Spurn, East Yorks, 14.viii.97, leg. B. R. Spence, first Yorkshire record; *Scythropia crataegella* (L.) West Melton, Rotherham, South Yorks., 26.ix.96 two examples from a substantial autumn generation, previously unrecorded; *Coleophora potentillae* Elisha Rushy Moor, Askern, South Yorks, 18.ix.96—larval cases on *Spiraea filipendula*,

moths emerged vi.97, first Yorkshire record; *Cacoecimorpha pronubana* (Hübner.) Bridlington, East Yorks. 27.viii.97, leg. A. S. Ezard, first Yorkshire record; *Adoxophyes orana* (F. v. R.) Spurn, East Yorks. 19.viii.97, leg. B. R. Spence, first Yorkshire record; *Thisanotia chrysonuchella* (L.) Spurn, East Yorks., 7.vi.87, leg. B. R. Spence, first Yorkshire record; *Platytes cerussella* (D. & S.) Spurn, East Yorks. four 9.vi.97, leg. B. R. Spence, first Yorkshire record; *Apomyelois bistriatella* (Hulst.) ssp. *neophanes* (Durr.) Skipwith Common, East Yorks., 3.ix.96, first Yorkshire record; *Utitula edmandsii* (Pack.) Spurn, East York. 8.vii.97, new to Britain (Plate VI, Fig. 6).

BLAND, K. P.—*Ypsolopha sequella* (Clerck) Leith, Edinburgh, NT2875, 16.ix.97, taken by D. Robertson, second Scottish locality; *Elachista bisulcella* (Dup.) Tobermory, Isle of Mull NM5055, reared from mines in *Deschampsia cespitosa* collected 29.vi.97 reared 3.viii.97, new to VC103; *Schiffermuelleria subaquilella* (Staint.) an unusually coloured example, Fealar, Perthshire, NN9979, 25.vi.97; *Mompha langiella* Hübner. Methven Wood, Perthshire, NO0526, larvae on *Epilobium obscurum* 8.vi.97, reared 3.vii.97, third Scottish locality; *Scythris grandipennis* (Haw.) Fedwfawr, Anglesey, SH6081, larvae in *Ulex gallii* 22.v.97, reared 31.vi.97; *Cacoecimorpha pronubana* (Hübner.) Tarvin, Cheshire, SJ4866, 23.viii.97; *Cydia compositella* (Fab.) Thurston Shore, SJ2383, 13.viii.97; *Numonia marmorea* (Haw.) Newborough Warren, Anglesey, SH4264, larvae in webs 23.v.97, reared 29.vi.–4.vii.97.

BRITTON, M. R.—*Ypsolopha sylvella* (L.) Dunnington, York, larva on *Quercus* 16.vi.97, reared 28.vii.97; *Y. vittella* (L.) Boroughbridge, North Yorks, larva on *Ulmus glabra* 27.iv.97, reared 10.vi.97; *Aspilapteryx tringipennella* (Zell.) Scarborough Castle, Yorks. mine in folded *Plantago lanceolata* 2.v.97, reared 15.v.97; *Ancyris subarcuana* (Doug.) Strensall Common, Yorks., 4.vi.97; *Amphisbatis incongruella* (Staint.) Spaunton Moore, Hutton-le-hole 8.iv.97; *Eudonia angustea* (Curt.) Hepworth, York, 22.viii.97, *Teleiodes luculella* (Hübner.) Skipwith Common, Selby, Yorks. oak galls collected 22.iv.97 reared 16–25.v.97.

CLANCY, S. P.—*Pediasia fascelinella* (Hübner.) Dungeness, 5.vi.97; *Margaritita sticticalis* (L.) 9.viii.97; *Conobathra tumidana* (D. & S.) Dungeness, 1.viii.97; *Sciota hostilis* (Steph.) a short series reared from a female taken at New Romney 7.vi.96.

CLARKE, J.—*Eurrhyncha hortulata* (L.) ab. Thorpeness 29.vi.97; *Sitochroa palealis* (D. & S.) Lingfield, Surrey, 8.viii.97, Andover, Hants. 18.vii.97; *S. verticalis* (L.) Breckland 10–13.vi.97; *Udea fulvalis* (Hübner.) in public toilet, Studland, Dorset, 4.viii.97; *Mecyna flavalis* (D. & S.) Wilmington, Sussex, 2.viii.97—over 100 recorded; *Cnaemidophorus rhododactyla* (D. & S.) reared from Epping Forest 1997.

COLLINS, G. A.—*Coleophora wockeella* Zell. Chiddingfold, Surrey, cases on *Stachys betonica* x.97.

COOK, R. R. *Calamotropha paludella* (Hübner.) Holton Heath, Dorset, 7.viii.97; *Pediasia fascelinella* (Hübner.) Winterton Dunes, Norfolk, 16.vii.97; *Platytes cerussella* (D. & S.) Breck, Suffolk, vi.97; *Anerastia lotella* (Hübner.) Lakenheath, Suff., 11.vi.97; *Sitochroa verticalis* (L.) Lakenheath, Suffolk, 10.vi.97; *Ostrinia nubilalis* (Hübner.) Studland Heath, Dorset, 7.ix.97; *Trachycera marmorea* (Haw.) Martin Down, Hants. 6.vii.97.

CRONIN, A. R.—*Evergestis limbata* (L.) Portslade, six specimens taken in 1997 including one reared from *Sisymbrium officinale*.

DAWSON, J.—*Evergestis extimalis* (Scop.) Fulbourn, Cambs. 24.vi.97; *Sitochroa palealis* (D. & S.) Devil's Dyke, Cambs. 15.vii.96; *Marasmarcha lumaedactyla* (Haw.) Devil's Dyke, Cambs. 7.vii.96.

EMMET, A. M. *Argyresthia cupressella* (Wals.) Ipswich, Suffolk & Harwich, Essex, 2.vii.97, new to the British list; *Monochroa hornigi* (Staud.) Saffron Walden, 5.vi.97, new to north Essex; *Gelechia senticetella* (Staud.) Saffron Walden, 6.viii.97,

second record from north Essex; *Phalonidia affinitata* (Doug.) Saffron Walden, 19.vi.92; *Platytes alpinella* (Hübner) Saffron Walden, 7.viii.97; *Agdistis bennetii* (Curt.) Saffron Walden, 11.viii.97; *Margaritia sticticalis* (L.) Saffron Walden, 15.viii.97; *Pterophorus baliodactylus* Zell. Saffron Walden 12.vi.97, new to north Essex.

FAIRCLOUGH A. J. & R.—*Acleris abietana* (Hübner) Holystone, Northumberland, 10 specimens beaten from *Picea abies* x.96; *Crambus pratella* (L.) Bamburgh and Lindisfarne, Northumberland, vii.97.

HALL, N. M.—*Nemapogon clematella* (Fab.) Ashley Hill, Berks, reared from larvae on fungus on coppiced hazel, BENHS field meeting x.96; *Caloptilia populetorum* (Zell.) Broadmoor Bottom NR, Berks, SU8563, reared from regenerating *Betula* x.97; *Phyllonorycter platani* (Staud.) Reading, Berks, mines 24.x.96; *P. leucographella* (Zell.) Reading, Berks, mine 24.x.96.

HART, C.—*Stenoptilia islandicus* (Staud.) near Ben Lawers, Perthshire, early vii.97. Illustrations of early stages on *Saxifraga hypnoides* on which the species had been reared.

HECKFORD, R. J.—*Bohemannia quadrimaculella* (Boh.) Plympton, VC3, 7.viii.97 new to Devon; *Phyllonorycter strigulatella* (L. & Z.) near Gavrick Copse VC3 reared from *Alnus incana* 1.ix.97 new to Devon; *Tebenna micalis* (Mann) Ernesettle, Plymouth, VC3, reared from *Pulicaria dysenterica* 22.viii.97; *Acrolepiopsis marcidella* (Curtis) Paine's Wood, VC13, 12.vi.97 new to Sussex; *Coleophora gardesanella* Toll near Kennford, reared from *Achillea millefolium* 14.vi 8.vii.97 new to Devon; *C. deviellea* Zell. Perranarworthal, VC1, reared from *Suaeda maritima* 13.vi–1.vii.97, new to Cornwall; *Schiffermuelleria grandis* (Desv.) Upperton Wood, VC3, 18.v.97, near Canonteign Barton, VC3, 26.v.97; *Ethmia terminella* Flet. Birling Gap, VC14 reared from *Echium vulgare* 31.v.97; *Metzneria neuropterella* (Zell.) near Beachy Head, VC14, reared from *Cirsium acaule* 1 & 3.vi.97; *Athrips tetrapunctella* (Thunb.) Tulloch Moor, VC96, 22.vi.97; *Bactra lacteana* Caradja Trowlesworthy Warren VC3, 19.vii.97 third specimen; *Diasemiopsis ramburialis* (Dup.) Plympton, VC3, 21.viii.97. Species whose larvae had not previously been found or described from Britain: *Nemapogon wolffiella* K. & N. Hembury Woods, near Buckfastleigh, VC3, reared from *Hypoxylon multiforme*, 29.iv–1.v.97 and Piall Bridge, VC3 reared 6.vi.97; *Glyphipterix thrasionella* (Scop.) Delamore Common, VC3, reared from *Juncus acutiflorus* 21 & 25.v.97; *Argolamprotes micella* (D. & S.) Delamore Common, VC3, reared from *Rubus idaeus* 3.v.97 and Billacombe, Plymstock, Plymouth reared 14.v.97; *Crambus pascuella* (L.) Trowlesworthy Warren, VC3, reared from *Festuca ovina* 28.v.97; *Homoeosoma nimbella* (Dup.) St Mary's, Isles of Scilly, reared from *Jasione montana* 10 & 27.v.97.

HENWOOD, B.—*Yponomeuta sedella* (Treits.) Abbotsskerswell, Devon, 13.viii.97; *Tebenna micalis* (Mann) Abbotsskerswell, ex pupa on *Pulicaria dysenterica* 16.ix.97; *Catoptria permutatella* (H.-S.) Torpins, Kincardineshire, 28.vii.97; *Palpita unionalis* (Hübner) Abbotsskerswell, 17.viii.97.

HEPPENSTALL, R. I.—Microlepidoptera taken at Rossington, Doncaster, S. Yorks.; *Calybites phasianipennella* (Hübner) 12.vi. & 2.viii.97; *Zelleria hepariella* Staint., 7.viii.97, new to VC63; *Coleophora therinella* Tengst., 8.vii.97; *C. asteris* Mühl., 8.viii.97, new to VC63; *C. vestianella* (L.), 9.vii.97; *C. tamesis* Waters, 9.vii.97; *C. bipennella* (Zell.), 8.vii.97; *Oegoconia deauratella* (H.-S.), 16.vii.97; *Acleris literana* (L.), 8.viii.97; *Epinotia rubiginosana* (H.-S.) 26.v.97; *Crambus hamella* (Thunb.) 20.viii.97; *Platytes alpinella* (Hübner) 7.viii.97, one of four taken between 2 & 8.viii.; *Endotricha flammealis* (D. & S.) 8.viii.97, also taken 12.viii. new to VC63.

KNILL-JONES, S. A.—Microlepidoptera from the Isle of Wight, Freshwater unless otherwise stated: *Caloptilia stigmantella* (Fab.) Cranmore, 13.vii.97; *Argyresthia*

brockeella (Hübner.) Cranmore 9.vii.97, new to VC10; *Pseudoswammerdamia combinella* (Hübner.) 22.v.97; *Prays fraxinella* (Bjerk.) 17.vi.97; *Ypsolopha ustella* (Clerck) Cranmore, 9.vii.97; *Plutella porrectella* (L.) 28.iv.97; *Enicostoma lobella* (D. & S.) 15.vi.97; *Agonopterix alstromeriana* (Clerck) Binstead, 7.iii.97; *Monochroa palustrella* (Doug.) Cranmore, 10.vii.97, new to VC10; *Teleiodes vulgella* (Hübner.) 2.viii.97; *T. sequax* (Haw.) 2.ix.97; *Aroga velocella* (Zell.) 14.viii.97; *Caryocolum blandella* (Doug.) 24.vii.97; *Blastobasis lignea* Wals. 8.viii.97; *Trachysmia inopiana* (Haw.) Cranmore, 12.vi.97; *Agapeta hamana* (L.) Bembridge, 1.viii.97; *Cochylis roseana* (Haw.) 30.vii.97; *C. atricapitana* (Steph.) 22.viii.94; *Eupoecilia ambiguella* (Hübner.) 17.viii.97, new to VC10; *Choristoneura hebenstreitella* (Müll.) Cranmore, 12.vi.97; *Clepsis consimilana* (Hübner.) 8.viii.97; *Epagoge grotiana* (Fab.) Cranmore, 10.vii.97; *Epiphyas postvittana* (Walk.) 19.ix.97; *Croesia forsskaeleana* (L.) Bembridge, 1.viii.97; *Acleris laterana* (Fab.) 18.vii.97; *A. comariana* (L. & Z.) 15.vii.97; *A. sparsana* (D. & S.) 25.ix.97; *A. aspersana* (Hübner.) Freshwater Bay Downs, 21.vii.97; *A. variegana* (D. & S.) 21.vii.97; *A. logiana* (Clerck) Binstead, i.97, B. J. Warne, new to VC10; *A. cristana* (D. & S.) 29.vii.97; *A. literana* (L.) Binstead, 14.v.97; *Apotomis betuletana* (Haw.) Cranmore, 13.viii.97; *Lobesia abscisana* (Doubl.) 19.vii.97; *Bactra robustana* (Christoph) Bembridge, 1.vii.97; *Zeiraphera isertana* (Fab.) 10.vii.97; *Epiblema rosaecolana* (Doubl.) Cranmore, 13.viii.97; *E. costipunctana* (Haw.) Cranmore, 10.vii.97; *Eudemis profundana* (D. & S.) 9.vii.97; *Eucosma cana* (Haw.) 21.vii.97; *Gypsonoma aceriana* (Dup.) Bembridge, 1.viii.97; *Pammene regiana* (Zell.) 8.vi.97; *Dichrorampha alpinana* (Treits.) 14.vii.97, new to VC10.

LANGMAID, J. R.—*Nemapogon wolffiella* K. & N. Havant Thicket, VC11, reared from larvae & pupae on *Hypoxylon multifforme* on dead birch 5.v.97, emerged from 8.v.97, new to Hampshire; *Coleophora tricolor* Wals. Elvedon, Suffolk, reared from *Clinopodium acinos*, cases found 17.ix.96, emerged from 18.vi.97; *Coleophora devielli* Zell. Hayling Island, VC11, reared from *Suaeda maritima*, cases found 11.ix.96, emerged 4.vii.97, new to Hampshire; *C. aestuariella* Bradl. Hayling Island, VC11, reared from *Suaeda maritima*, larvae found 6.x.96, emerged from 14.vii.97, new to Hampshire; *Agonopterix curvipunctosa* (Haw.) Berrow, Somerset, larvae found 19.vi.97, emerged from 11.vii.97; *Metzneria neuropterella* (Zell.) Beachy Head, E. Sussex, larvae found 31.viii.96, emerged 14.vii.97; *Teleiodes wagae* (Nowicki) Rewell Wood, near Arundel, W. Sussex, larvae on *Castanea sativa* 1 & 6.x.96, emerged from 21.iii.97, previously unrecorded host plant; *Crombruggia distans* (Zell.) Portsmouth, Hampshire 8.viii.97—I. R. Thirlwell new to Hampshire.

LOWE, N. R. & C. D.—Lepidoptera from South Wales and the Marches: *Bucculatrix ulmella* Zell. Waun-y-Mynach, Brecks. 15.vi.97; *Ypsolopha mucronella* (Scop.) Ewyas Harold Common, Herefs. 24.vi.97; *Coleophora peribenanderi* Toll, Gelli Rhyd Farm, Brecks. 12.vii.97; *Athrips mouffettella* (L.) Llangorse, Brecks. 26.vii.97; *Aethes francillana* (Fab.) East Moors, Cardiff, 17.vii.97; *Pammene obscurana* (Steph.) Allt House Wood, Brecks. reared from *Betula* stump emerged 1.v.97; *Cydia funebrana* (Treits.) Nolton, Pembs., 19.vi.97; *Dichrorampha flavidorsana* Knags East Moors, Cardiff, 17.vii.97; *D. simpliciana* (Haw.) East Moors, Cardiff, 17.vii.97; *Cryptoblabes bistriga* (Haw.) Gelli Rhyd Farm, Brecks. 12.vii.97; *Dioryctria abietella* (D. & S.) Llangorse, Brecks. 24.vii.97; *Ephestia parasiella* Staud. Gelli Rhyd Farm, Brecks. 12.vii.97.

MANNING, D. V.—From unimproved chalk grassland at Studham, Beds. 23.vii.97: *Nemophora metallica* (Poda); *Syncopacma taeniolella* (Zell.) new to VC30; *Merrifieldia baliodactylus* (Zell.). From Salcey Forest, Northants. 18.viii.97: *Acleris cristana* (D. & S.) f. *subnigralana* Manley (four taken by P. D. Sharpe). [Mr R. Fairclough subsequently reported a specimen of this form collected South Benfleet Essex

19.x.1985] New county records for Bedfordshire, VC30: *Elachista alpinella* Staint. Sharnbrook, 18.viii.97; *Coleophora asteris* Mühl. Sharnbrook, 10.viii.97, a rare inland record of this coastal species. New county record for Northants., VC32: *Ephestia parasitella* Staud. ssp. *unicolorella* Staud. Kingsthorpe, 16.vi.97 (P. D. Sharpe).

MCCORMICK, R.—Lepidoptera from Devon: *Crambus uliginosellus* Zell. Colaton Raleigh Common, 26.vii.97; *Eudonia pallida* (Curt.) Colaton Raleigh Common, 26.vii.97; *Parapoynx stratiotata* (L.) Newton Abbot Racecourse, 11.vii.97 & Colaton Raleigh Common, 26.vii.97; *Cataclysta lemnata* (L.) Colaton Raleigh Common, 26.vii.97 & Axmouth Saltings, 2.viii.97; *Sitochroa palealis* (D. & S.) Chardstock, late viii.97, A. Jenkins; *Phlyctaenia stachydalis* (Germ.) Hakeford, VC4, 21.vi.97 and Bramble Wood near Okehampton, 13.vi.97; *Palpita unionalis* (Hübner.) Exeter, 11.ix.97, P. Butter; *Galleria mellonella* (L.) Exeter, 12.viii.97, P. Butter; *Cryptoblabes bistriga* (Haw.) Bramble Wood, near Okehampton, 18.vi.97 and Exeter, 10.vi.97, P. Butter; *C. gnidiella* (Mill.) Newton Abbot, larvae and pupae found in pomegranate at Sainsbury's store; *Numonia marmorea* (Haw.) Berry Head, Brixham 12.vii.97; *Buckleria paludum* (Zell.) Colaton Raleigh Common, 26.vii.97; *Amblyptilia acanthadactyla* (Hübner.) Ashclyst Forest 5.vii.97, P. Butter and Hakeford, VC4, 21.vi.97, P. Butter, *Platyptilia ochrodactyla* (D. & S.) Otterton and Teigngrace, larvae 15.v.97, moths reared, also Exminster Marshes, 5.vii.97. Microlepidoptera from Scotland: *Catoptria permutatella* (H.-S.) Rinabach, 12.viii.97; *Margaritia sticticalis* (L.) three at Feshiebridge 11–12.viii.97; *Stenoptilia bipunctidactyla* (Scop.) Rinach, 12.viii.97 and Feshiebridge, mid-viii.97.

PARSONS, M. S.—*Nemapogon ruricolella* (Staint.) Ockham, Surrey, ex larvae collected 24.v.96; *N. clematella* (Fab.) Daneway, Surrey, larva 11.v.97, emerged 11.vi.97; *Coleophora lassella* Staud. Ashtead Common, Surrey, 24.vi.97; *Telechrysis tripuncta* (Haw.) Ashtead Common, Surrey, 22.vi.97; *Metzneria neuropterella* (Zell.) Belle Tout, Eastbourne, larvae on *Cirsium acule* 22.ix.96, reared 23.vii.97; *Neofriseria peliella* (Treits.) Rye Harbour, 25.vii.97; *Scrobipalpa instabilella* (Doug.) Pagham Harbour, W. Sussex, reared from larvae on *Halimione*, *Salicornia*, *Atriplex* and *Lycium barbarum* all collected 14.iv.97; *S. ocellatella* (Boyd) Pagham Harbour, W. Sussex, larvae collected 14.iv.97, Camber, E. Sussex, larvae collected 15.iii.97, Greatstone, E. Kent, larvae collected 15.iii.97; *Scrobipalpula tussilaginis* (Frey) Charmouth, Dorset, larvae collected 31.x.95; *Dystebenna stephensi* (Staint.) Ashtead Common, Surrey, 22.vi.97; *Sparganothis pilleriana* (D. & S.) Pigbush, New Forest, 19.vii.97; *Endothenia ustulana* (Haw.) Ditchling Common, E. Sussex, 19.vi.97; *Gypsonoma sociana* (Haw.) Ashtead Common, Surrey, 22.vi.97; *Pelochrista caecimaculana* (Hübner.) White Downs, Surrey, 4.vii.97; *Strophedra nitidana* (Fab.) Ashtead Common, Surrey, 17.vii.97; *Crambus silvella* (Hübner.) Pigbush, New Forest, 19.vii.97; *Amblyptilia acanthadactyla* (Hübner.) Willington Down, E. Sussex, 17.viii.97; *Wheeleria spilodactylus* (Curt.) Rye Harbour, E. Sussex, 15.vii.97.

PORTER, J.—*Eucosma pupillana* (Clerck) Portland, Dorset, 22.vii.97; *Endotricha flammealis* (D. & S.) Hamstreet, E. Kent, 25.vii.97, normal, melanistic and yellowish colour forms; *Ephestia cautella* Walk. Surbiton, Surrey, in a shop 29.ix.95.

PRATT, C. R.—*Chrysocrambus linetella* (Fab.) Lyminster, near Littlehampton, W. Sussex, 8.vi.97 (Mrs R. E. Pratt), possibly the first 20th century record; *Elaphila nymphaeata* (L.) Peacehaven, E. Sussex, specimens ranging from those suffused with olive-green on the forewings and black on the hindwings to a predominantly whitish obsolescent form.

ROUSE, T.—*Dolicharthria punctalis* (D. & S.) reared 18.vii.97 from a larva found inside the tap root of *Lotus corniculatus*, a new observation; *Palpita unionalis* (Hübner.) Densole, Kent, 3.ix.97, (two others taken at Dungeness, 17.x.97).

SIMPSON, A. N. B. —*Bohemannia quadrimaculella* (Boh.) near Bransford, Worcs. swept from *Alnus* by River Teme 18.vii.96, first postwar VC record; *Nemapogon wolffiella* K. & N. Tidesly Wood, Worcs. 24.vi.97, first VC record since VCH; *Phyllonorycter leucographella* (Zell.) Worcester City mines 13.i.96, new to VC37; *Pseudatemelia josephinae* (Toll) Uffmoor Wood, Worcs., 1.vii.97, new to VC37; *Monochroa lutulentella* (Zell.) Black Meadow, Chaddesly Wood NNR, Worcs. floating in water 1.vi.97, new to VC37; *Blastobasis decolorella* (Woll.) Blakeshall Common, Worcs. 2.vii.97, new to VC37; *Aethes margaritana* (Haw.) Dungeness, Kent, 14.vii.97; *Epiphyas postvittana* (Walk.) Lodge Hill Farm, Wyre Forest, Worcs. 24.viii.97, new to VC37; *Dichrorampha consortana* (Steph.) Pepper Wood, Worcs. 29.vi.97, swept from roadside bank, new to VC37; *Phlyctaenia perhucidalis* (Hübner) Feckenham Wild Moor, Worcs. 16.vii.96, new to VC37; *Platyptilia isodactylus* (Zell.) Ashmoor Common, Worcs. reared from *Senecio aquaticus* 21.vii.96, new to VC37.

SIMS, I. —*Micropterix tunbergella* (Fab.) Medmenham, Berks. 29.iv.97; *Eriocrania umimaculella* (Zett.) Bear Wood, Wokingham, Berks. larva on *Betula pendula* 18.v.96, brought indoors, 8.ii.97, emerged 4.iii.97; *E. sparrmanella* (Bosc) Medmenham, Marlow, Bucks., larvae 20.vi.96, emerged 10.iii.97; *E. haworthi* Bradl. Bear Wood, Berks. larvae on *Betula* 18.v.96, emerged 6.iii.97; *E. sangii* (Wood) Bear Wood, Berks. larvae on *Betula* 8.v.96, emerged indoors 2.iii.97; *Ectodemia rubivora* (Wocke) Pheasant Hill Wood, Hambledon, Bucks., adults and cocoons from mines in *Rubus caesius* 7.x.96, emerged 9.vi.97; *Stigmella splendidissima* (H.-S.) Medmenham, Bucks. adults and cocoons, from mines in *Rubus caesius*, 13.xi.96, emerged indoors 27.iii.97; *S. aeneofasciella* (H.-S.) Homefield Wood, Medmenham, Bucks. adults and cocoons, from mines in *Potentilla erecta* 9.x.96, emerged indoors 1.iv.97; *S. centifoliella* (Zell.) adults and cocoons, from mines in *Rosa canina* 4.vi.97, emerged 22.vi.97; *Antispila petryi* Martini Medmenham, Bucks. adults and cocoons from mines in *Cornus sanguinea* 27.viii.90, emerged 15.v.91; *Dahlica triquetrella* (Hübner) Orpington, Kent, per Dennis O'Keeffe, adults and larval cases 18.iii.97, emerged 22.iii.97; *Nemapogon wolffiella* K. & N. adults and pupal exuviae from *Hypoxylon multiforme*, Warburg Reserve, Bix, Oxford, larvae 3.v.97 emerged 15.vi.97, Bear Wood, Berks. larvae 17.v.97 emerged 24.vi.97; *Tineola bisselliella* (Hum.) Lower Earley, Berks. 22.vi.97, Whitley, Reading, 6.ix.97; *Callisto denticulella* (Thunb.) Medmenham, Berks. working on *Malus sylvestris* 20.vii.96 emerged 15.iv.97; *Leucospilapteryx omissella* (Staint.) Lower Earley, Berks. mines in *Artemisia vulgaris* 16.ix.97; *Coleophora binderella* (Koll.) Lower Earley, Berks. adults and cases from *Alnus glutinosa* 3.vii.94, emerged 5.vii.94; *C. albitarsella* Zell. Ashley Hill Forest, Knowl Hill, Maidenhead, Berks. adults and cases from *Glechoma hederacea* 27.x.96, emerged indoors 13.iii.97; *C. argentula* (Steph.) Medmenham, Bucks. adults and cases from *Achillea millefolium* 18.ix.96, emerged 11.vii.97; *C. artemisicolella* Braund Lower Earley, Berks. larval feeding on *Artemisia vulgaris* seeds 26.ix.97; *Stephensia brunnichella* (L.) Medmenham, Bucks. adult, mine and cocoon from *Calamintha* sp. 21.vii.97, emerged 29.vii.97.

Live material: *Dahlica triquetrella* (Hübner) Larvae from adults hatched from material from Orpington, Kent, 18.iii.97. Eggs from eight females produced c.200 larvae, hatching in about three weeks. Larvae fed on algae and micro-lichen (*Lecanora* sp.) for a week, thereafter on dead insects, preferring Lepidoptera and Hemiptera; *Coleophora artemisicolella* Braund Lower Earley, Reading, Berks. larvae on *Artemisia vulgaris* beside the River Loddon, new to VC22.

SLADE, D. J. —*Acrolepia autumnitella* Curt. Radyr, Cardiff, ST1380, 11.iii.97; *Coleophora silenella* H.-S. Tidal Sidings, Cardiff, Glam. ST2075, 24.vi.97; *C. deauratella* L. & Z. Tidal Sidings, Cardiff, Glam., 8.vii.96; *C. trifolii* (Curt.)

Tidal Sidings, Cardiff, Glam., 24.vi.97; *Syncopacma taeniolella* (Zell.) Tidal Sidings, Cardiff, Glam., 14.vii.96 & 4.vii.97; *Aethes dilucidana* (Steph.) Tidal Sidings, Cardiff, Glam., 20.vii.96; *A. francillana* (Fab.) Tidal Sidings, Cardiff, Glam., 8.vii.96; *Pediasia contaminella* (Hübner). Butetown, Cardiff, Glam. ST1875, viii.1997 coll. P. Howlett; *Pyrausta cingulata* (L.) Splott, Cardiff, Glam. ST199765, 17.viii.97.

STERLING, M. J.—*Nemapogon wolffiella* K. & N. Waresley, Hunts. larva on *Hypoxylon* 24.v.97; *Phyllonorycter scabiosella* (Doubt.) Addington, Surrey, from larva on *Scabiosa columbaria* 3.viii.97; *Monochroa lutulentella* (Zell.) Wicken Fen, Cambs. 3.viii.96; *Neofriseria singula* (Staud.) Enfield, Middx. from larva on *Rumex acetosella* 17.v.97; *Caryocolum proximum* (Haw.) South Kensington, London from larva on *Stellaria neglecta* 8.v.97; *Apotomis lineana* (D. & S.) Abbotsley, Hunts. from larva on *Salix alba* 6.vi.97; *Melissoblastes zelleri* (Joann.) Southwold, Suffolk from larva among *Ononis repens* 14.v.97.

STERLING, P. H.—*Nemapogon wolffiella* K. & N. Oakers Wood, Dorset, from pupa in *Hypoxylon multifforme* on dead birch collected 8.v.97, emerged 12.v.97; *Acrolepiopsis marcidella* (Curt.) near Corfe Castle, Dorset, at rest on *Ruscus aculeatus* 11.vi.97, not seen in Dorset since last century; *Coleophora tricolor* (Wals.) Elveden, W. Suffolk, from larva within a seed capsule of *Acinos arvensis* collected 17.ix.96, emerged vii.97; *Argolamprotes micella* (D. & S.) Lyme Regis, Dorset, from larva in a shoot of *Rubus fruticosus* agg. collected 12.iv.97, emerged 15.v.97; *Cosmopterix scribaiella* Zell. Owermoigne, Dorset, from larvae in mines in *Phragmites australis* collected 11.x.96, emerged v.97 new to Britain, mines are similar to those of *C. lienigiella* (Zell.) but larvae are longer and thinner and highly mobile in the mine; *Scythris sicella* (Zell.) Chesil Beach, Dorset, from larvae in tubes in sand under various herbs including *Armeria maritima* and *Plantago coronopus* collected on 13 & 15.v.97, emerged vii.97, not seen since last century; *Piercea curvistrigana* (Staint.) Portland, Dorset, from larvae in seedheads of *Solidago virgaurea* collected 4.x.96, emerged vii.97; *Endothenia ustulana* (Haw.) Furzebrook, Dorset, from larva in a stem of *Ajuga reptans* collected 22.v.97, emerged vii.97.

STERLING, P. H. & LANGMAID, J. R.—An exhibit illustrating the life history of *Acrolepiopsis marcidella* (Curt.) and its association with the foodplant *Ruscus aculeatus*. Several stages of development were shown including the young mines in the cladodes, the shoot-boring and berry-mining phases, as well as the pupal cocoon and two reared imagines. The larva feeds from July to October before pupating and emerges the same year, although it is possible that some larvae hibernate and complete development in the following spring.

WARNE, B. J.—*Acleris logiana* (Clerck) Binstead, Isle of Wight, i.97; *A. literana* (L.) variegated from Binstead, Isle of Wight, 14.v.97 (Plate VI, Fig. 3).

WEDD, D.—*Acleris permutana* (Dup.) Rosslare sandhills, Co. Wexford, 10.viii.96; *Anania verbascalis* (D. & S.) Henley, Oxon, 20.vii.97.

WRIGHT, S.—Lepidoptera from the Misson Training Area, Notts. recorded during July–August of the years 1991, 1995, 1996 & 1997. *Syncopacma larseniella* (Gozm.) new to VC56; *Epinotia demarniana* (F. v. R.); *Sitochroa palealis* (D. & S.); *Phlyctaenia perlucidalis* (Hübner).

FOREIGN LEPIDOPTERA

DOBSON, A. H.—*Colotis evagore nouna* Lucas, two males from a colony in a gully on undeveloped land in a residential district of Nerja, Malaga, Spain, 6 & 11.xi.1996.

EDWARDS, P. J.—About 35 voucher specimens of moths from an MV trap run in the Cantabrian region of NW Spain at about 3000 ft in very poor weather conditions

in the last week of vi.1997. The species exhibited included *Thalera fimbrialis* Scop., *Trachea atriplicis* L., *Hecatera corsica weissii* Draudt (easily mistaken for *H. dysodea* D. & S.), *Chloantha hyperici* D. & S. and *Epizeuxis calvaria* D. & S. Calle (Noctuidos Españoles says that *calvaria* occurs in NE Spain and is very rare).

ELSTON, H. J.—*Mellicta athalia* Rott., an underside var. taken near Gréolières, Alpes-Maritimes, France, 13.vi.1993.

FINCH, G., FINCH, M. A., FOX B. W., FOX, J. W., HAYNES, P. F. AND WARING, P. M.—A display describing and illustrating the BENHS Field Expedition to Belize, 29.iv–16.v.1997. Survey sites were Pook's Hill Lodge, in a private Nature Reserve, the adjacent Tapir Mountain National Park, La Milpa Field Station (in the Rio Bravo Conservation Area) and Las Cuevas (a BMNH field station in the Chiquibul National Park).

(1) Rhopalocera—BWF displayed a selection of 17 butterflies from the 59 species identified so far. The 59 were from the families Papilionidae (7 spp.), Pieridae, (4 spp.), Nymphalidae (47 spp.) and Lycaenidae (1 sp.), and represent only a small fraction of the 700 spp. known to occur in Belize. The specimens were obtained by hand netting and bait trapping.

(2) Heterocera—PFH displayed all the specimens of Diophtinae (Fam. Noto-dontidae), Agaristinae (Fam. Noctuidae) and Pericopinae (Fam. Arctiidae) collected on the 1997 expedition and approximately 50% of the Ctenuchinae (Fam. Arctiidae) and Lithosiinae (Fam. Arctiidae). There are 400 species of Diophtinae worldwide, mostly distributed in Central & South America. No published lists or catalogues exist and they are poorly represented in museums. There are 11 000 species of Arctiidae worldwide of which 6000 are Neotropical. Current literature searches have revealed no lists or catalogues on the Belizean fauna. There are about 300 Agaristinae species worldwide, mostly occurring in the old world tropics and poorly represented in the Neotropics. There is a lack of readily accessible data on the 'smaller' moths of Belize.

(3) PMW displayed a selection of ten distinctive moth species from the 1996 & 1997 expeditions to Belize, identified and researched to find out how local or widespread the moth fauna recorded on the expeditions was likely to be: Bombycidae: *Epia muscosa* Butl. Notodontidae: *Procolax apulana* Schaus. Acronictinae (Fam. Noctuidae): *Stauropterus persimilis* Hamps. Ophiderinae (Fam. Noctuidae): *Tautobriga euspila* Walk., *Macrodus columbalis* Guen., *Ceroctena* (formerly *Sosxetra*) *amynta* Cramer and *Sosxetra grata* Walk. Megalopygidae: *Podalia orsilocha* Cramer and *Trosia haemorrhoidalis* Walk. Uraniidae: *Sematura lunus* L. Whereas some of these species are restricted to Central America, others occur down to Peru, Brazil or even Paraguay.

HALL, N. M.—(1) A hadenine moth taken at Talavera, Toledo, Spain, 8.v.1996, thought to be *Discestra gredosi* Laever, together with *Discestra trifoli* Hufn. and *Cardepija sociabilis* Grasl. for comparison. Although the *gredosi* specimen looks almost indistinguishable from *sociabilis*, the genitalia are similar to *trifoli*. *gredosi* is only known from the summits of the Sierra de Gredos (hence the name). Talavera is on the plains just SE of the Sierra.

(2) Moths from Fuerteventura, Canary Islands. (i) Jandia, xii.1996: *Ophiura tirhaca* Cramer. (ii) Corralejo, ii.1997: *Cosmophila flava* Fab., four males and three females bred from larvae on low plants, *Syngrapha circumflexa* L., *Heliothis armigera* Hb., a pale form, and *Blepharita usurpatrix* Rebel.

(3) Moths from Spain, vi.1997. (i) Basque Country. Armintza, Vizcaya, 6 & 7.vi.1997: *Lacanobia splendens* Hb., *Atypha pulmonaris* Esp., considered a great rarity in Spain, *Hypena crassalis* Fab. and *Selenia lunularia* Hb. (ii) Aragon. Biel, Zaragoza, 8 & 9.vi.1997: *Marumba quercus* D. & S. an ab. and a normal form,

Craniophora pontica Stgdr., *Aetheria cappa* Hb., *Raphia hybris* Hb., two melanic specimens, *Apamea sicula* Turati, not listed by Calle, two examples, *Menophra harterti* Roths. and *Apamea epomidion* Haw., present in Spain according to Karsholt & Razowski but not listed by Calle. (iii) Cataluña. L'Hospitalet, Tarragona, 12 & 13.vi.1997: *Orgyia trigotephras* Boisd., *Pennithera firmata* Hb. and *Catocala mariana* Ramb. (iv) Andalucía. Vera Playa, Almería, 18 & 19.vi.1997: *Xanthodes albago* Fab. and *Pelusia plumosa* Mab. Playa de los Genoveses, Almería, 22.vi.1997: *Spodoptera exigua* Hb., a black form. Mini Hollywood, Almería, 25.vi.1997: *Agrotis spinifera* Hb. and *Cryphia petrea* Guen. (v) Castilla y León. Cebreros, Ávila, 26.vi.1997: *Zethes insularis* Ramb. Pradena, Segovia, 27.vi.1997: *Noctua interposita* Hb. and *Hylaea fasciaria* L., a weakly marked form.

HARMAN, T. W.—Australian Sphingidae. Australia has 59 species, which include interesting endemic species and subspecies. Species exhibited included: *Cequesa triangularis* Don., *Metamimas australasiae* Don., *Langia tropicus* Moulds, *Leucomonia bethia* Kirby, *Theretra oldenlandii firmata* Walk., *Theretra silhetensis intersecta* Butl., *Theretra margarita* Kirby, *Theretra turneri* Lucas, *Agrius godarti* Macl., *Agrius convolvuli* L., *Coenotes eremophilae* Lucas, *Nephele subvaria* Walk., *Hippotion velox* Fab., *Hippotion scrofa* L., *Synoecha marmorata* Lucas, *Gnathothlibus erotus eras* Boisd., *Daphnis placida* Walk., *Psilogramma menephron* Cramer, *Acosmeryx miskini* Murr., *Cizara ardeniae* Lewin, *Hyles lineata livornicoides* Lucas, *Macroglossum vacillans* Walk., *Macroglossum hirundo errans* Walk. and *Holioenema brachycera* Lower.

HONEY, M. R.—A selection of Pyralids and other microlepidoptera from a small collection of moths taken on Mallorca, 19.iv–5.v.1997, many of which have been recorded in Britain, though their flight period is much later in Britain. The names will be added to an updated distributional checklist for the Balearic Islands being compiled from published references and personal observations. MRH is therefore interested to receive any records of Lepidoptera from the Balearic Islands. (i) 'British' Species: *Coleophora mayrella* Hb., *Oegoconia caradjai* Popescu-Gorj & Cap., *Cochylis molliculana* Zell., *Clepsis consimilana* Hb., *Lobesia botrana* D. & S., *Crociosema plebejana* Zell., *Eucosma cana* Haw., *Aglossa pinguinalis* L., *Cryptoblades gnidiella* Mill., *Pempeliella ?dilutella* D. & S., *Aponyeloides ceratoniae* Zell., *Euzophera osseatella* Treit., *Homoeosoma sinuella* Fab., *Eudonia angustea* Curt., *Udea ferrugalis* Hb. and *Pyrausta despicata* Scop. (= *cespitalis* D. & S.). (ii) Non-British Species: *Ectobalea ?gronoviella* Scop., *Pyroderces argyrogrammos* Zell., *Lamoria anella* D. & S., *Hydriris ornatalis* Dup., and *Denisia luctuosella* Dup., apparently new to Spain.

MARTIN, G., ARMITAGE, M. AND BAILLOD, F.—Moths from Tanneron, Alpes-Maritimes, France, 28.iii to 1.iv.1997, caught using both MV and actinic lamps. The site was 400 m above sea level, near Cannes. Night temperatures were approx. 6°C: *Mimas tiliae* L., *Cilix glaucata* Scop., *Petrophora chlorosata* Scop., *Pachynemina hippocastanaria* Hb., *Pseudopanthera macularia* L., *Selenia lunularia* Hb., *Lycia hirtaria* Cl., *Agriopsis marginaria* Fab., *Menophra ?nycthemeraria* Geyer, *Cleora cinctaria* D. & S., *Campaea honoraria* D. & S., *Cyclophora pupillaria* Hb., *Cyclophora ruficiliaria* H.-S., *Scopula marginepunctata* Goetz, *Idaea seriata* Schr., *Xanthorhoe fluctuata* L., *Nebula salicata* D. & S., *Aplocera plagiata* L., *Peridea anceps* Goetz, *Acronicta rumicis* L., *Minucia lunaris* D. & S., *Phlogophora meticulosa* L., *Cloantha hyperici* D. & S., *Spudaea rutilicilla* Esp., *Conistra rubiginea* D. & S. *Conistra staudingeri* Grasl., *Conistra erythrocephala* D. & S., *Xylocampa areola* Esp., *Valeria jaspidea* Vill., *Mythimna sicula* Treit., *Orthosia gothica* L., *Orthosia cruda* D. & S., *Orthosia cerasi* Fab., *Orthosia gracilis* D. & S., *Egira conspicularis* L., *Xestia c-*

nigrum L., *Cerastis faceta* Treit., *Peridroma saucia* Hb., *Agrotis puta* Hb., *Eilema sororcula* Hufn., *Diaphora mendica* Cl. and *Arctia villica* L.

REED, J. *Cachyreus marshalli* Butler 1898, discovered in France. This species arrived in Europe (Majorca) in 1989, spread to the Spanish mainland in 1992, and then spread steadily along the Mediterranean coast. Now, in 1997, it has crossed the border from Spain to France. Butterflies were seen at a number of locations along the French Catalan coast and larvae were found feeding internally in the flowers of Geraniums in tubs and window-boxes. At the summer temperatures of the Mediterranean, the species seems capable of completing a generation in as little as six weeks.

REVELL, R. J.—A selection of moths collected in Namibia during viii.1993 and ix.1997.

Collecting sites were: Waterberg Plateau Park Rest Camp, Etosha National Park, Namutoni Rest Camp, Omaruru Game Park and Ozombanda Guest Farm, 30 k South of Okahandja. (i) Eupterotidae: *Jana aurivilliusi* Roths., 1 male, undetermined species, 1 male. (ii) Sphingidae: *Hyles lineata* Esp., 1 female. (iii) Ennominae (Fam. Geometridae): *Zeuctoboarmia hyax* Townsend, 1 female, *Sesquialtera ramicurati* Herb., 1 male. (iv) Chloephorinae (Fam. Noctuidae): *Setoctena stalii* Wall., 2 male, 1 female. (v) Catocalinae (Fam. Noctuidae): *Grammodes stolida* Fab. 2 male, *Ctenusa pallida* Hamps., 3 male, 1 female, *Cerocala vermiculosa* H.-S., 1 male, 1 female, *Audea malanoplaga* Hamps., 2 male, 2 female, *Pericyma atrifusa* Hamps., 3 male.

DIPTERA

There was a slight reduction in exhibits this year, possibly because the annual dipterists' meeting was a week later and those competing for the prize of a store box on offer at that meeting were keeping their entries in reserve. These events, which accidentally clashed in 1996, are also usually two weeks apart. Nevertheless a good range of species were exhibited, including a sprinkling of the rarities found on the Abergavenny summer field meeting (some of the Monnow riverside species appearing in more than one exhibit), with some other remarkable finds from Scotland and the south-east of England.

ALEXANDER, K. N. A. AND FOSTER, A. P.—A selection of the more interesting flies found during the work of the National Trust's Biological Survey Team in Surrey and Sussex in 1997: *Rhagio strigosus* (Meig.) (Rhagionidae), Box Hill, Surrey, 24.vii, swept in sheltered area of chalk grassland; *Oxycera morrisii* Curt. (Stratiomyidae), Singleton, Drovers Estate, W. Sussex, 16.vii, swept from vegetation along a chalk stream; *Myopites inulaedyssentericae* Blot (Tephritidae), Mottisfont Estate, S. Hants., 15.vii, swept from a boggy field; *Gymnosoma rotundatum* (L.) (Tachinidae), found on many sites including Woolbeding Estate, 16.vii and Petworth Park, 4.viii, W. Sussex and Denbies Hillside, Surrey, 25.vii.

CHANDLER, P. J.—(1) *Astiosoma rufifrons* Duda (Asteiidae), Leckford, Hants., 12.x.1997, in numbers on cold ash of bonfire sites from recent coppicing of hazel woodland; only recorded from six sites in southern England, always about bonfire ash in woodland, since it was first recorded as British by Chandler (1978, *Proc. Trans. Brit. Ent. Nat. Hist. Soc.* 11: 23–24).

(2) Two species of scarce saproxylic Diptera from alder and ash woodland in Glen Coiltie below Divach Falls near Drumnadrochit, Inv., vii.1997: *Symmerus nobilis* Lackschewitz (Ditomyiidae), new to Britain, males found around piles of rotten logs by river, one each on 21., 22. and 24.vii; a Swiss female and both sexes of the widespread species *S. annulatus* (Meig.) were exhibited for comparison; *Oedalea*

hybotina (Fall.) (Hybotidae), male 22.vii, added to the British list by Chandler (1992, *Dipterists Digest* 12: 16–22) from Morrone Birkwood, Aber., the only other British record known being a male collected by Laurence Clemons in Kent; the common species *O. stigmatella* Zett., collected with it at both Scottish sites was exhibited for comparison.

(3) A selection of Diptera from France and Switzerland, ix.1997: *Keroplatus reaumurii* (Dufour) (Keroplatidae), France, Forêt de Fontainebleau, 20–21.ix, reared from larva on fungus-encrusted branch on ground and *K. tipuloides* Bosc, same site, a large female found sitting on its cocoon under bracket of *Fomes fomentarius* on a beech log, both species exhibited with their cocoons; *Lonchoptera pictipennis* Bezzi (Lonchopteridae), a distinctive species with dark wing tips in the male, Switzerland, Klöntal, 10.ix, on boulders in dry shaded stream bed; *Cheilosia canicularis* (Panz.) (Syrphidae), Switzerland, Klöntal, 10.ix, at *Leontodon* flowers in pasture; *Pherbellia rozkosnyi* Verbeke (Sciomyzidae), Switzerland, Rochefort, 15.ix, in dry woodland; *Paraclusia tigrina* (Fall.) (Clusiidae), France, Fontainebleau, 20–21.ix, on standing decayed beech trunk; *Periscelis wimmertzi* Egger (Periscelididae), as previous species, around decayed beech; five species of Drosophilidae: *Leucophenga quinque maculata* Strobl, Switzerland, Klöntal, 10.ix and by River Areuse, 16.ix; *Drosophila unimaculata* Strobl, same sites as previous species; *D. nigricolor* Strobl and *D. testacea* von Roser, both Switzerland, Klöntal, 10.ix; *Chymomyza amoena* (Loew), France, Bourg-en-Bresse, Forêt de la Réna, 16.ix, a North American species with banded wings (Canadian specimens were exhibited in 1995), which develops in rotting apples and chestnuts, established in central Europe for about 20 years but only recently recorded in France (will it turn up here next?).

GODFREY, A.—Scarce Diptera collected in 1997, unless stated otherwise: *Oxycera terminata* Meig. (Stratiomyidae), River Monnow at Maerdy Farm, 13.vi; *Platypalpus luteolus* (Collin) (Hybotidae), Dan-y-Graig LNR, Gwent, 8.vi; *P. melancholicus* (Collin), River Monnow at Kentchurch, 13.vi; *Tachydromia acklandi* Chvála (Hybotidae), River Monnow at Maerdy Farm, 13.vi, very local on river gravels; *T. costalis* (von Roser), River Monnow at Alltynys, 13.vi; *T. halidayi* (Collin), River Monnow at Kentchurch, 13.vi; *Pocota personata* (Harris) (Syrphidae), two examples taken in an emergence trap above an oak rot-hole emptied 5.vi and 1.viii at Hagnaby, Lincs.; *Cnemacantha muscaria* (Fall.) (Lauханиidae) and *Pteromicra leucopeza* (Meig.) (Sciomyzidae), Magor Marsh, Gwent Levels, 12.vi; *Stenomicroa cogani* Irwin and *S. delicata* (Collin) (Stenomicroidae), Crymlyn Bog, Glam., 11.vi; *Heleomyza captiosa* (Gorodkov) (Heleomyzidae), Drewston Tunnel, Yorks., 14.i.1996, a cave species previously recorded in Britain from only two Scottish caves; *Eutaenionotum guttipenne* (Stenhammar) (Ephydriidae), from its only known site, Thorne & Hatfield Moors, Yorks., 18.x.1996; *Cordylura aemula* Collin (Scathophagidae), Moccas Park, Heref., 11.vi; *Cosmetopos dentimanus* (Zett.) (Scathophagidae), River Monnow at Kentchurch, 13.vi, a riverbank species previously known in Britain only from the Test and Itchen in Hants (also see exhibit by I. Perry below).

HACKETT, D. S.—*Stratiomys potamida* Meig. (Stratiomyidae), Panshanger, Herts., 19.vii.1997; *Anasimyia contracta* Claussen & Torp (Syrphidae), Hampstead Heath Extension, Middx., 27.vi.1997.

HALSTEAD, A. J.—Local flies collected in 1997 with one exception: *Leptarthrus vitripennis* (Meig.) (Asilidae), White Downs SSSI, Surrey, 14.viii.1988, the third British record of this species only recently recognized here; *Stratiomys singularior* (Harris) (Stratiomyidae), grazing marsh at Lodmoor RSPB Reserve, Weymouth, Dorset, 19.vii; *Vanoyia tenuicornis* (Macq.) (Stratiomyidae), Chesil Beach, Dorset,

17.vii; *Thyridanthrax fenestratus* (Fall.) (Bombyliidae), Brentmoor Heath, near West End, Surrey, 6.vii; *Dialineura anilis* (L.) (Therevidae) and *Pamponerus germanicus* (L.) (Asilidae), on dunes at Merthyr Mawr Warren, Glam., 14.vi; *Myolepta dubia* (F.) (= *M. luteola* (Gmelin)) (Syrphidae), River Wey at RHS Garden, Wisley, Surrey, 9.vii, on *Heracleum* flower; *Neoascia interrupta* (Meig.) and *N. obliqua* Coe (Syrphidae), swept at same site as previous species, 23.iv; *Rhingia rostrata* (L.) (Syrphidae), Lower Wyndcliff Woods, Gwent, 9.vi; *Euphranta toxoneura* (Loew) (Tephritidae), same site as *Neoascia* species, 29.v; *Tephritis conura* (Loew) (Tephritidae), Blaen-y-Cwm, Mynydd du Forest, Brecon., 10.vi. on *Cirsium palustre* flower; *Phasia hemiptera* (F.) (Tachinidae), same site as *Neoascia* species, 23.ix, at *Hedera helix* flowers, a late date for this species.

HODGE, P. J.—Eight species of Diptera, from south-east England. New vice-county records are marked with an asterisk (*). *Atherix marginata* (F.) (Rhagionidae), Bewl Water, East Sussex, TQ6833, 28.vii.1997, female swept off tall emergent vegetation on bank of River Bewl at outflow from reservoir; *Atrichops crassipes* (Meig.) (Rhagionidae), Buxted Park, East Sussex, TQ4923, 12.vi.1997, two males swept off alder *Alnus glutinosa* growing on bank of R. Uck (a tributary of the R. Ouse), and Salehurst, East Sussex, TQ750239, 16.vi.1997, several swept on the bank of the R. Rother; **Platypalpus politus* (Collin) (Empididae), Billingshurst, West Sussex, TQ0825, 13.vi.1997, one male swept off bank of Cedar Brook; *Hilara discoidalis* Lundbeck (Empididae), Bewl Water, East Sussex, TQ6833, 20.vi.1997, male swept off willows on bank of River Bewl near outflow from reservoir; *Microdon mutabilis* (L.) (Syrphidae), Ambersham Common, West Sussex, SU9010, 4.vi.1997, one swept in heathland bog; **Oxyyna flavipennis* (Loew) (Tephritidae), Billingshurst, West Sussex, TQ0825, 13.vi.1997, one male swept off bank of Par Brook, and Hoyle, West Sussex, SU9018, 9.vii.1997, numerous on yarrow *Achillea millefolium*; **Nemoraea pellucida* (Meig.) (Tachinidae), Hackhurst Downs, Surrey, TQ0948, 13.vii.1997, resting on shaded path; **Subclytia rotundiventris* (Fall.) (Tachinidae), Ebernoe Common, West Sussex, SU9727, 11.viii.1997, one on wild angelica *Angelica sylvestris* umbel.

MANN, D. J. AND BARCLAY, M. V. L.—A single specimen of the notable Therevid *Thereva plebeja* (L.) from an unbaited pitfall trap on vegetated shingle, Denge Marsh, Dungeness, Kent, TR0118, vi.1997.

PARKER, M.—Scarce and local Diptera collected in 1997: *Atherix ibis* (F.) (Athericidae), riverbank at Tintern Parva, Gwent, 9.vi; *Oxycera terminata* Meig. (Stratiomyidae), River Monnow at Longtown, Heref., 8.vi, on riverside gravel; *Odontomyia tigrina* (F.) and *O. ornata* Meig. (Stratiomyidae), Magor Marsh, Gwent, 13.vi; *Statiomys potamida* Meig. (Stratiomyidae), South Heath, Dorset, 20.vii, male at umbels; *S. singularior* (Harris), Lodmoor RSPB Reserve, Dorset, 29.vi, male swept from saltmarsh; *Leptarthrus brevivestris* (Meig.) (Asilidae), Glen Hinnisdal, Skye, N. Ebudes, 10.vii; *Cheilosia mutabilis* (Fall.) (Syrphidae), Penllwyn, Gwent, 11.vi, herb-rich grassland; *Chalcosyrphus eunotus* (Loew) (Syrphidae), Bracketts Coppice, Dorset, 25.v, sitting on streamside gravel, second Dorset record; *Epistrophe diaphana* (Zett.) (Syrphidae), Tattan Wood, Dorset, 15.vi, hovering above umbels; *Eristalis rupium* F. (Syrphidae), Glen Hinnisdal, Skye, N. Ebudes, 10.vii; *Platycheirus* species (Syrphidae), an unidentified species close to *P. scutatus* Meig., but superficially resembling *P. albimanus* (F.), Delcombe Wood, Dorset, 3.v and 31.v, both males at *Allium ursinum*, more material required to establish its status; *Rhingia rostrata* (L.) (Syrphidae), Tintern, Gwent, 14.ix, on *Geranium robertianum*; *Sphegina sibirica* Stackelberg (Syrphidae), Blaen-y-Cwm, Mynydd du Forest, Brecon., 10.vi, in numbers at *Conopodium majus* flowers at the picnic site,

a grassy clearing between conifer plantations; *Trichopsomyia flavitarsis* (Meig.) (Syrphidae), Eriskay Island Nature Reserve, South Uist, Western Is., 9.vii, male swept from meadow; *Xanthandrus comtus* (Harris) (Syrphidae), Tattan Wood, Dorset, 19.vii, female caught in flight; *Conops ceriaeformis* Meig. (Conopidae), Binnegar Plain, Dorset, 23.viii, on *Cirsium arvense*.

PERRY, I.—A selection of uncommon Diptera found in 1997: *Chrysopilus erythrophthalmus* Loew (Rhagionidae), River Monnow, Heref., 8.vi, a male swept from beneath alders and a female on shingle; *Oxycera leonina* (Panz.) (Stratiomyidae), East Walton Common, Norfolk, 14.vii, swept from oak trees, the only known British site (first found there by A. E. Stubbs on 6.vii.1989) for this species yet to be added formally to the British list; *Odontomyia argentata* (F.) (Stratiomyidae), Market Weston Fen, Suffolk, 3.v; *Scenopinus niger* (De Geer) (Scenopinidae), Wandlebury, Cambs., reared from a larva found in a dry rot-hole of beech, date not given; *Diaphorus hoffmanseggii* Meig. (Dolichopodidae), River Monnow, Gwent, 13.vi, a male on *Impatiens glandulifera*; *Sphagina sibirica* Stackelberg (Syrphidae), from four sites in the Central Highlands of Scotland, suggesting that this species first recorded from Britain in 1991 (added to British list by Stubbs, 1994, *Dipterists Digest* (Second Series) 1: 23–25) is spreading rapidly: Camghouran Birch Wood, Rannoch, Perth., 22.vi; Balnaguard Glen, Perth., 26.vi; River Spey, Aviemore, Inv., 29.vi; Loch Morlich, Inv., 29.vi; usually associated with conifer plantations as at Mynydd du Forest (see exhibit by M. Parker above), but all these sites were exclusively or predominantly deciduous woodland; *Antichaeta analis* (Meig.) (Sciomyzidae), Wicken Fen, Cambs., 5.v; *Ectinocera borealis* Zett. (Sciomyzidae), Mynydd Llangatwg, Powys, 11.vi; *Themira nigricornis* (Meig.) (Sepsidae), Wicken Fen, Cambs., 12.iv; *Gymnosoma rotundatum* (L.) (Tachinidae), Ashford Hanger, Hants., 30.v, on flowers of *Aegopodium podagraria*; *Cosmetopus dentimanus* (Zett.) (Scathophagidae), River Monnow at Skenfrith, Gwent, 13.vi, on leaves of *Petasites hybridus*; *Thricops aculeipes* (Zett.) (Muscidae), Ben Lawers, Perth., 24.vi, 700 m.

SMITH, M. N.—Some uncommon Diptera taken in 1996 and 1997: *Ctenophora flaveolata* (F.) (Tipulidae), Nettlebed Woods, Oxon., 3.v.1997, a pair in copula, flying at a height of 12 feet along a woodland margin and a second male was also seen, few other Oxon. records but it occurred at the nearby Warburg Reserve in 1993; *Haematopota grandis* Meig. (Tabanidae), ICI Severnside Estate, Severn Beach, Glos., 29.vi.1996, a single male flying over rough grassland; *Stratiomys singularior* (Harris) (Stratiomyidae), same site as previous species, 23.vi.1997, feeding at flowers of *Leucanthemum vulgare*; *Arctophila mussitans* (Müller) (= *A. fulva* (Harris)) (Syrphidae), Deep Moor, High Bullen, N. Devon, 3.ix.1997, resting on *Mentha aquatica*; *Mallota cimbiciformis* (Fall.) (Syrphidae), disused railway line, Semington, Wilts., 2.vii.1997, female feeding at bramble (*Rubus* species) flowers.

COLEOPTERA

ALEXANDER, K. N. A.—A selection of the more significant finds from the year's recording in Gloucestershire. New vice-county records are marked with an asterisk (*). New records for both N. & S. Glos. are marked with a double asterisk (**). **Aphanisticus pusillus* (Ol.) (Buprestidae), Bisley Road Cemetery, Stroud, E. Glos., 26.v.1997; ***Ampedus rufipennis* (Steph.) (Elateridae), adults and larvae frequent in decaying heartwood of old ash pollards, Southam, 10.iv.1997; *Dirhagus pygmaeus* (F.) (Eucnemidae), Ban y Gor Woods Nature Reserve, 12.vii.1997; *Malthinus frontalis* (Marsh.) (Cantharidae), parkland at Highgrove House, Tetbury, 2.vii.1997; *Abdera biflexuosa* (Curt.) (Melandryidae), Bulley Woods, Higham, 2.vii.1997;

Platyrhinus resinosus (Scop.) (Anthribidae), Southam, 10.iv.1997, very widespread on the Cotswolds; *Trachodes hispidus* (L.) (Curculionidae), one beaten from yew, Ban y Gor Woods Nature Reserve, Wye Gorge, 12.vii.1997; ** *Sibinia primitus* (Herbst) (Curculionidae), from mine spoil, Lightmoor Works, Forest of Dean, 13.ix.1997.

ALEXANDER, K. N. A., FOSTER, A. P. & TELFER, M. G.—A selection of the more interesting beetles found during the work of the National Trust's Biological Survey in 1997. *Zabrus tenebrioides* (Goeze) (Carabidae), Slindon Estate, W. Sussex, 10.vii.1997; *Odacantha melanura* (L.) (Carabidae), in *Phragmites*-choked ditch, Heigham Holmes, E. Norfolk, 18.ix.1997; *Masoreus wetterhalli* (Gyll.) (Carabidae), Brancaster Dunes, W. Norfolk, 16.ix.1997; *Demetrias monostigma* Samouelle (Carabidae), common in Marram tussocks, Blakeney Point, W. Norfolk 9.ix.1997 and Brancaster Dunes, W. Norfolk, 10.ix.1997; *Dromius longiceps* Dejean (Carabidae), singletons swept from reed-bed, Brancaster Marsh, W. Norfolk, 12.ix.1997; *Scydmaenus rufus* Müller, P. W. J. & Kunze (Scydmaenidae), Harewoods Estate, Surrey, 6.viii.1997; *Dirhagus pygmaeus* (F.) (Eucnemidae), Slindon Estate, W. Sussex, 14.vii.1997 & Mottisfont Estate, S. Hants., 15.vii.1997, (also on Drovers Estate, 11.vii.1997 & Capite Wood, W. Sussex, 19.vii.1997); *Hylis olexai* (Palm) (Eucnemidae), one of many examples in a large well-rotted beech trunk which had fallen in the 1987 great storm, Slindon Estate, W. Sussex, 9.vii.1997; *Cantharis fusca* L. (Cantharidae), widely seen in hay meadows, etc., Newton, I.o.W., 19.v.1997; *Dorcatoma dresdensis* Herbst (Anobiidae), from the fungus *Inonotus dryadeus* on oak, Bookham Common, Surrey, 25.vii.1997; *Dorcatoma serra* Panz. (Anobiidae), from the fungus *I. dryadeus* on oak, Mottisfont Estate, S. Hants., 15.vii.1997; *Uleiota planata* (L.) (Cucujidae), one of eight, three of which were teneral, observed under bark of oak in log pile, Danbury Common, S. Essex, 20.viii.1997; *Crypticus quisquilius* (L.) (Tenebrionidae), Brancaster Dunes, W. Norfolk, 16.ix.1997; *Prionychus melanarius* (Germar) (Tenebrionidae), a single adult under bark of huge fallen beech trunk, larvae also found under beech bark, Slindon Estate, W. Sussex, 14.vii.1997; *Abdera biflexuosa* (Curt.) (Melandryidae), swept in mature beech woodland, Styal Woods, Cheshire, 24.vi.1997; *Scraptiia testacea* Allen (Scraptiidae), active on exposed heartwood of old oak, Mottisfont Estate, S. Hants., 9.vii.1997; *Chrysolina violacea* (Müller, O. F.) (Chrysomelidae), Mottisfont Estate, S. Hants., 7.vii.1997; *Byctiscus populi* (L.) (Atelabidae), one of two adults beaten from young aspen *Populus tremula*, Backwarden Reserve, Danbury Common, S. Essex, 19.viii.1997; *Rhinocyllus conicus* (Frölich) (Curculionidae), one of many seen on spear thistle *Cirsium vulgare* (Savi) in cattle pasture, Lower Halsdon Farm, S. Devon, 27.vi.1997; *Hypera dauci* (Oliver) (Curculionidae), Brancaster Dunes, W., Norfolk, 16.ix.1997; *Phytobius olssoni* (Israelson) (Curculionidae), on *Lythrum portula*, Brown Pond, Headley Heath, Surrey, 30.vii.1997.

ALLEN, A. J. W.—1) Some beetles collected in Scotland during July 1997, *Carabus clathratus* L. (Carabidae), near the west coast; *Amara quenseli* (Schoenherr) (Carabidae), Dorback Burn; *Liocurtusa minuta* (Ahrens) (Leiodidae), near R. Nethy; *Aciilis canaliculatus* (Nicolai) (Dytiscidae), Abernethy Forest RSPB Reserve; *Dytiscus lapponicus* Gyll. (Dytiscidae), near Lecht; *Leptura sanguinolenta* L. (Cerambycidae), Abernethy Forest RSPB Reserve; *Zeugophora turneri* Power (Chrysomelidae), Granton-on-Spey; *Phyllodecta polaris* Schneider (Chrysomelidae), Scurr Mor; *Notaris aethiops* (F.) (Curculionidae), near R. Nethy.

2) *Philonthus spinipes* Sharp (Staphylinidae), in manure heap, West Parley, Dorset, SZ08, 5.iii.1997, the first British record.

BARCLAY, M. V. L.—1) Some uncommon British beetles. *Carabus auratus* L. (Carabidae), Reading, Berks., a small colony of this naturalized species has existed

for a number of years; *Stenolophus skrimshirani* Steph. (Carabidae), Burton Mill Pond, West Sussex, SU9717, vi.97, under reed litter; *Ampedus rufipennis* (Steph.) (Elateridae), Silwood Park, Berks., iv.97, in rotten beech, in exit holes of *Platystomos albinus* (L.) (Anthribidae), and beaten from lime; *Ischnodes sanguinicollis* (Panz.) (Elateridae), Silwood Park, Berks., iv.97, under dry beech bark on ground; *Anthrenus sarnicus* Mrocskowski (Dermestidae), Tynemouth Street, Fulham, London, iii.96, reared from larvae under carpet; *Ptinus sexpunctatus* Panz. (Ptinidae), Eelbrook Common, King's Road, London, TQ2576, iii.96, under bark of London plane; *Tillus elongatus* (L.) (Cleridae), Silwood Park, Berks., vi.97, on dead beech at night, beaten from foliage of beech and beaten from elder blossom among dead beech; *Notolaemus unifasciatus* (Latreille) (Cucujidae), Bookham Common, Surrey, under bark of dead oak sticks; *Cryptolestes spartii* (Curtis) (Cucujidae), Brentmoor Heath, Lightwater, Surrey, in tunnels of *Agrius viridis* (L.) (Buprestidae) on dying willow; *Tritoma bipustulata* F. (Erotylidae), Silwood Park, Berks., iv.97, on brackets on dead beech; *Cicones variegatus* (Hellwig) (Colydiidae), Silwood Park, Berks., vi.97, under fungus on dead beech; *Cicones undatus* Guérin-Méneville (Colydiidae), Bookham Common, Surrey, vi.97, in *Scolytus* workings on dead elm; *Colydium elongatum* (F.) (Colydiidae), Silwood Park, Berks., vi.97, on dead beech at night; *Teredus cylindricus* (Olivier) (Colydiidae), Silwood Park, Berks., iv.97, on dead woodworm-infested oak at night; *Abdera biflexuosa* (Curt.), Silwood Park, Berks., vi.97, beaten from dead oak; *Abdera quadrifasciata* (Curt.) (Melandryidae), Silwood Park, Berks., vi.97, on cut surface of dead oak in sunlight; *Scraptia fuscula* Müller (Scraptiidae), Richmond Park, vii.95, beaten from moribund oak; *Grammoptera variegata* (Germar) (Cerambycidae), Bookham Common, Surrey, vi.97, beating hawthorn by Isle of Wight Pond; *Leptura scutellata* F. (Cerambycidae), Silwood Park, Berks., vi.97, females on dead beech, males on elder blossom; *Donacia aquatica* (L.) (Chrysomelidae), Burton Mill Pond, West Sussex, SU9717, vi.97, on lakeside *Carex* and in water net samples; *Donacia crassipes* F., Burton Mill Pond, West Sussex, SU9717, vi.97, collected from *Nymphaea* while treading water; *Platystomos albinus* (L.), Silwood Park, Berks., iv.97, on dead beech at night; *Rhynchites olivaceus* Gyll. (Attelabidae), Silwood Park, Berks., iv.97, beaten from young elm, less frequently from oak; *Rhynchites interpunctatus* Steph., Silwood Park, Berks., iv.97, beating freshly budding oak; *Platypus cylindrus* F. (Platypodidae), Bookham Common, Surrey, vi.97, in galleries in freshly felled oak, in company with *Colydium elongatum* (F.).

2) Some unusual beetles identified from pitfall traps on lichen heath and vegetated shingle, Denge Marsh, Dungeness, Kent, TR0118, vi/vii 1997. *Trechus fulvus* Dejean, *Pterostichus macer* (Marsh.), *Amara lucida* (Dufts), *Badister unipustulatus* Bonelli, *Dromius vectensis* Rye, (Carabidae) *Quedius pallipes* Lucas, *Staphylinus erythropterus* L., *Platydracus stercorarius* (Olivier), *Mycetoporus piceolus* Rey (Staphylinidae), *Athous campyloides* Newman (Elateridae), *Orthochaetes setiger* (Beck), *Sibinia primitus* (Herbst) (Curculionidae).

COLLINS, G. A. -1) A pair of *Cryptocephalus coryli* (L.) (Chrysomelidae) from Mickleham, Surrey taken in June 1997 together with some live larvae which were reared on Hazel *Corylus avellana* L. as part of a captive breeding exercise for English Nature's Species Recovery programme.

2) A specimen of *Saperda carcharias* (L.) (Cerambycidae) taken near Grantown-on-Spey, Elgin, on 9.viii.1997.

HACKETT, D.—*Agonum muelleri* (Herbst) (Carabidae), Marks Hall Estate, N. Essex, 2.viii.1997; *Thanatophilus rugosus* (L.) (Silphidae), Tyttenhanger, Herts., TL196055, 8.vii.1997; *Thanatophilus sinuatus* (F.) (Silphidae), Tyttenhanger, Herts., TL196055, 8.vii.1997; *Scydmaenus rufus* Müller (Scydmaenidae), under oak bark,

Paradise Wildlife Park, Broxbourne, Herts., TL335068, 5.v.1997; *Aphodius erraticus* (L.) (Scarabaeidae), in meadow by R. Colne, Longford, Middx., TQ043762, 25.vii.1997; *Trachys minuta* (L.) (Buprestidae), beaten from small-leaved lime *Tilia cordata* Miller, Marks Hall Estate, N. Essex, 2.viii.1997; *Athous campyloides* Newman (Elateridae), under stone by garden pond, Bryanstone Road, Hornsey, Middx., TQ200885; *Silis ruficollis* (F.) (Cantharidae), Rammey Marsh, Enfield, Middx., TQ375996, 24.vi.1997; *Anthocomus rufus* (Herbst) (Melyridae), Walthamstow Marsh, S. Essex TQ348877, 28.vii.1997; *Orchesia micans* (Panz.) (Melandryidae), reared from old Beefsteak Fungus *Fistulina hepatica* (Schaeff), Tottenham Cemetery, Middx., TQ333912, emerged 7.vii.1995; *Orchesia undulata* Kr. (Melandryidae), under oak bark, Paradise Wildlife Park, Broxbourne, Herts., TL335068, 5.v.1997; *Melandrya caraboides* (L.) (Melandryidae), pronotum and elytra on willow, Rammey Marsh Lock, Middx., TQ3798, 13.iv.1997; *Mordellistena* spp. (Mordellidae) (originally identified as *M. pumila* (Gyll.)), Tottenham triangle, Middx., TQ344888, 22.v.1995; *Donacia crassipes* F. (Chrysomelidae), Viaduct Pond, Hampstead Heath, Middx., TQ269865, 12.vii.1997; *Donacia marginata* Hoppe (Chrysomelidae), Langham Pond, Runnymede, Surrey, TQ004720, 26.vii.1997; *Donacia semicuprea* Panz. (Chrysomelidae), R. Mimram near Panshanger, Herts., TL280135, 19.vii.1997; *Donacia simplex* F. (Chrysomelidae), R. Colne near Tyttenhanger, Herts., TL196055, 8.vii.1997; *Donacia versicolore* (Brahm) (Chrysomelidae), on *Potamogeton* sp., Foxden Farm Pond, Witheridge, N. Devon, SS826147; *Donacia vulgaris* Zschach (Chrysomelidae), Marks Hall Estate, N. Essex, TL839252, 2.viii.1997; *Podagrica fuscicornis* (L.) (Chrysomelidae), Ealing Common, Middx., TQ186802, 22.vii.1997; *Larinus planus* (F.) (Curculionidae), on thistle, Hawkrigde, Exmoor, N. Devon, 26.v.1997; *Syagrius intrudens* Waterhouse (Curculionidae), Helford River, Manaccan, W. Corn., SW776250, viii.197; *Notaris scirpi* (F.) (Curculionidae), in *Juncus* tussock, Mungells Pond, Dinton Pastures Country Park, Berks., 4.x.1997.

HALSTEAD, A. J.—Some local Coleoptera taken in 1997. *Cicindela germanica* (L.) (Carabidae), on mud cliffs, Eype's Mouth, Dorset, 14.vii.1997; *Melanophila acuminata* (Degeer) (Buprestidae), on burnt pine trunk, Brentmoor Heath, near West End, Surrey, 1.vi.1997; *Ampedus elongatulus* (F.) (Elateridae), on grass stem NE of Redwood Lake, Dinton Pastures C.P., Winnersh, Berks., 17.v.1997; *Silis ruficollis* (F.) (Cantharidae), swept from grazing marsh, Lodmoor RSPB Reserve, Weymouth, Dorset, 19.vii.1997; *Anobium inexpectatum* Lohse (Anobiidae), reared from dead ivy stem, R. Wey at RHS Garden, Wisley, Surrey, emerged 23.iv.1997; *Nephus quadrimaculatus* (Herbst) (Coccinellidae), swept from ivy, R. Wey at RHS Garden, Wisley, Surrey, 16.ix.1997; *Scaphidema metallicum* (F.) (Tenebrionidae), under log beneath oak, RHS Garden, Wisley, Surrey, 10.iv.1997; *Grammoptera ustulata* (Schaller) (Cerambycidae), swept from oak tree, Brentmoor Heath, near West End, Surrey, 11.v.1997; *Cryptocephalus bipunctatus* (L.) (Chrysomelidae), swept from grassy slope, Powerstock Common, Dorset, 15.vii.1997; *Calomicrus circumfusus* (Marsh.) (Chrysomelidae), on sandy soil, Woodbury Common, S. Devon, 18.vii.1997; *Otiorhynchus raucus* (F.) (Curculionidae), in a garden, London SW14, Surrey, 30.vi.1997; *Strophosoma faber* (Herbst) (Curculionidae), swept from birch/heather, Brentmoor Heath, near West End, Surrey, 17.iv.1997; *Rhinocyllus conicus* (Froelich) (Curculionidae), swept, Powerstock Common, Dorset, 15.vii.1997; *Cryptorhynchus lapathi* (L.) (Curculionidae), reared from stem of *Salix hastata* in a garden, Edinburgh, EH1 2EL, Midloth., emerged 29.vii.1997; *Hadroplontus trimaculatus* (F.) (Curculionidae), on *Carduus nutans*, Old Castle Down, near St Brides Major, Glam., *Ceutorhynchus rapae* (Gyll.) (Curculionidae), on foliage of *Erysimum* sp. in a nursery, Elmstead Marker, S. Essex, 12.ix.1997.

HENDERSON, M.—Some Silphidae and other carrion-frequenting Coleoptera from N. Devon. 1) Beetles collected in four pitfall traps (large glass jars from Watkins & Doncaster, with holes, large enough to let beetles through, drilled in the hard plastic lids) baited with two-week old chicken fillets and set in a plant-rich meadow at Abbotsham near Bideford. The traps were set on 2.vi.1997 and examined on 5.vi.1997, when a tremendous variety of beetle species were present, some in large numbers. *Saprinus semistriatus* (Scriba) (Histeridae); *Hister impressus* F. (Histeridae); *Nicrophorus humator* (Gleditsch), (Silphidae); *Thanatophilus sinuatus* (F.) (Silphidae); *Ontholestes murinus* (L.) (Staphylinidae); *Onthophagus coenobita* (Herbst) & *O. similis* (Scriba) (Scarabaeidae).

2) Other Silphidae found included: *Nicrophorus vespillo* (L.) and *Silpha tristis* Illiger, Braunton Burrows, 4.vi.1997; *Nicrophorus humator* (Gleditsch) and *Necrodes littoralis* (L.) at MV light in a garden. Abbotsham 5.vi.1997.

HOARE D. I. B.—Coleoptera collected during BENHS field meetings in 1997 with an additional selection from Scotland, North Devon and S. Hants.

1) Dinton Pastures Country Park, Berks., 17.v.1997; *Badister dilatatus* Chaudoir (Carabidae), beside lake, compartment 7; *Oodes helopioides* (F.) (Carabidae), beside lake, compartment 7; *Copelatus haemorrhoidalis* (F.), lake, compartment 7; *Agapanthia villosoviridescens* (Degeer) (Cerambycidae), swept, compartment 4.

2) Prescombe Down, S. Wilts. and Melbury Down, Dorset, 21.vi.1997: *Altica palustris* Weise (Chrysomelidae), swept.

3) Eype's Mouth, Dorset, 5.vii.1997: *Bembidion quadripustulatum* Serville (Carabidae), on undercliff; *Drypta dentata* (Rossi), amongst vegetation on undercliff; *Bledius spectabilis* Kr. (Staphylinidae), at base of cliff; *Sitona gemellatus* Gyllenhal (Curculionidae), on *Ononis* on undercliff.

4) Kenfig N. N. R., Glam., 16.viii.1997: *Hydroglyphus pusillus* (F.) (Dytiscidae), in small pool; *Staphylinus brunnipes* F. (Staphylinidae), under polystyrene on dunes.

5) Wicken Fen, Cambs., 17.viii.1997: *Peltodytes caesus* (Halipilidae), *Hygrobia hermanni* (Hygrobiidae), *Agabus undulatus* (Schränk) (Dytiscidae), & *Ilybius quadriguttatus* (Lac. & Boisd.) (Dytiscidae), all in a pool in Adventurer's Fen; *Rhantus grapii* (Gyll.) (Dytiscidae), in brick pit; *Donacia sparganii* Ahrens (Chrysomelidae), off *Sparganium emersum* in Monk's Lode.

6) S. Hants: *Ampedus cinnabarinus* (Eschscholtz) (Elateridae), on 'Dorcus' log, Brockenhurst Park, 14.v.1997; *Liparus coronatus* (Goeze) (Curculionidae), on green, South Winchester Golf Course, 23.vi.1997.

7) N. Devon: *Nebria complanata* (L.) (Carabidae), under driftwood, Saunton Sands, 11.vii.1997.

8) Scotland: *Carabus glabratus* Paykull (Carabidae), Beachen Wood, Grantown-on-Spey, Elgin., 13.viii.1997; *Miscodera arctica* (Paykull) (Carabidae), near Allt Mor, Glenmore, Easternness, 18.v.1997; *Harpalus quadripunctatus* Dejean (Carabidae), on track, Well of the Lecht, Ladder Hills, Banff., 1.vi.1997; *Oreodytes davisi* (Curt.) (Dytiscidae), in shingle pool, R. Feshie, Easternness, 3.vi.1997; *Aclypea opaca* (L.) (Silphidae), on sandhills, Dorback, Elgin., 31.v.1997; *Staphylinus ophthalmicus* Scop. (Staphylinidae), coll. A. Jones, no data; *Aegalia sabuleti* (Panz.) (Scarabaeidae), on sandhills, Dorback, Elgin., 31.v.1997; *Cetonia cuprea* F. (Scarabaeidae), near nest of *Formica exsecta* Nylander (Hym., Formicidae), Glenmore, Easternness, v.1997; *Cantharis obscura* L. (Cantharidae), swept, Rock Wood Ponds, Glenfeshie, Easternness, 29.v.1997; *Bolitophagus reticulatus* (L.) (Tenebrionidae), on birch log, Glen Affric, Easternness, 27.v.1997; *Pytho depressus* (L.) (Pythidae), coll. A. Jones, no data; *Rhagium inquisitor* (L.) (Cerambycidae), Glenmore, Easternness, 1997; *Phytodecta pallida* (L.) (Chrysomelidae), off *Salix* sp., near Allt Mor, Glenmore,

Easternness, 18.v.1997; *Otiorhynchus arcticus* (Fabricius O.) (Curculionidae), under stone, Cairngorm, Banff., 28.v.1997.

HODGE, P. J. - Fourteen species of Coleoptera from various locations in England and Wales. New vice-county records are marked with an asterisk (*). *Chlaenius tristis* (Schaller) (Carabidae), Cors Geirch, Caernarvonshire, SH3235, 27.v.1997, running in sunshine on seepage; **Hapalaraea pygmaea* (Payk.) (Staphylinidae), Pebsham Wood, Bexhill-on-Sea, East Sussex, TQ7609, 4.x.1997, one beaten from ivy growing on oak tree in shaded pit; **Platydracus fulvipes* (Scop.) (Staphylinidae), Ambersham Common, West Sussex, SU9010, 9.vii.1997, one running across sandy path; *Quedius invreae* Gridelli (Staphylinidae), Moultsford Downs, Berkshire, SU5681, 15.vi.1997, one beaten off Hazel *Corylus avellana*; *Epiphanis cornutus* Esch. (Eucnemidae), Moultsford Downs, Berkshire, SU5681, 15.vi.1997, one beaten off Hazel *Corylus avellana*; **Ernobius pini* (Sturm) (Anobiidae), Ambersham Common, West Sussex, SU9119, 20.vii.1997, beaten off large partly-severed pine branch; *Corticaria umbilicata* (Beck) (Lathridiidae), Kirkby Moor, North Lincolnshire, TF2162, 22.ix.1997, numerous in suction samples from moss, birch *Betula* leaf litter and Ling *Calluna vulgaris* roots; **Mordellistena imitatrix* Allen (Mordellidae), Rye Harbour, East Sussex, TQ9418 23 2.vii.1997, one on Mugwort *Artemisia vulgaris* and Lewes, East Sussex, TQ420100, 25.vii.1997, one on Mugwort *Artemisia vulgaris*; **Bruchidius varius* (Ol.) (Chrysomelidae), Hoyle, West Sussex, SU9018, 13.viii.1997, one swept; **Bruchela rufipes* (Ol.) (Anthribidae), Unhill Bottom, Berkshire, SU5683, 15.vi.1997, on Wild Mignonette *Reseda lutea*; **Magdalis memnonia* (Gyll.) (Curculionidae), Ambersham Common, West Sussex, SU9119, 20.vii.1997, beaten off large partly-severed pine branch; **Cionus nigritarsis* Reitter (Curculionidae), Hoyle, West Sussex, SU9018, 13.viii.1997, one on Dark Mullein *Verbascum nigrum*; **Ceutorhynchus rapae* Gyll. (Curculionidae), Seaford, East Sussex, TV471996, 10.iv.1997, on Hoary Cress *Cardaria draba*; **Tychius squamulatus* Gyll. (Curculionidae), Chapel Common, West Sussex, SU8228, 4.v.1997, one male in suction sample from Bird's-foot Trefoil *Lotus corniculatus*.

KIRBY, P. - Some uncommon water beetles from the Peterborough district. *Haliphys mucronatus* Steph. (Haliplidae), Highland Drain, TF195064, 29.iv.1994 and Northey Park, TL235987, 11.ix.1996; *Noterus crassicornis* (Müller) (Noteridae), Ferry Meadows, TL154974, 28.ix.1990 and The Boardwalks LNR, TL177982, 10.vii.1992; *Hydroglyphus pusillus* (F.) (Dytiscidae), Ferry Meadows, TL146976, 28.ix.1990 and The Boardwalks LNR, TL177982, 10.vii.1992; *Coelambus nigrolineatus* Stev. (Dytiscidae), Thornhaugh Quarry, TF047002, 10.viii.1992; *Coelambus parallelogrammus* (Ahrens) (Dytiscidae), Dogsthorpe Star Brickpit, TF216017, 6.v.1992; *Graptodytes bilineatus* (Sturm) (Dytiscidae), Dogsthorpe Star Brickpit, TF216027, 6.v.1992; *Scarodytes halensis* (F.) (Dytiscidae), Thornhaugh Quarry, TF047002, 10.viii.1992 and Highland Drain, TF195064, 29.iv.1994; *Agabus conspersus* (Marsh.) (Dytiscidae), Dogsthorpe Star Brickpit, TF216027, 6.ix.1997; *Ilybius fenestratus* (F.) (Dytiscidae), Northey Park, TL235987, 11.ix.1996 and Stibbington Pits, TL088993, 6.vi.1993; *Rhantus frontalis* (Marsh.) (Dytiscidae), at MV light, Barnstock, Bretton, TF162004, 12.ix.1993; *Rhantus grapii* (Gyll.) (Dytiscidae), Highland Drain, TF195064, 29.iv.1994 and The Boardwalks LNR, TL177982, 19.iv.1991; *Rhantus suturalis* (Macleay) (Dytiscidae), The Boardwalks LNR, TL177983, 19.iv.1991 and Thornhaugh Quarry, TF047002, 10.viii.1992; *Gyrinus distinctus* Aubé (Gyrinidae), Dogsthorpe Star Brickpit, TF216027, 22.iv.1993 and Eye Green Pit, TF231034, 19.v.1986; *Gyrinus paykulli* Ochs (Gyrinidae), Dogsthorpe Star Brickpit, TF216027, 22.iv.1993 and Eye Green Pit, TF231034, 19.v.1986; *Georissus crenulatus* (Rossi) (Hydrophilidae), Dogsthorpe Star

Brickpit, TF216027, 16.v.1992 and Norman Cross Pit, TL162908, 16.vii.1997; *Hydrochus carinatus* Germar (Hydrophilidae), The Boardwalks LNR, TL177982, 10.vii.1992 and Moor Drain, TF190068, 5.vi.1994; *Hydrochus elongatus* (Schaller) (Hydrophilidae), Catchwater Drain, TF194063, 29.iv.1994 and Moor Drain, TF190068, 5.vi.1994; *Hydrochus ignicollis* Mots. (Hydrophilidae), Stibbington Pits, TL088993, 30.vi.1993; *Helophorus nanus* Sturm (Hydrophilidae), The Boardwalks LNR, TL177983, 29.iii.1991; *Laccobius sinuatus* Mots. (Hydrophilidae), Highland Drain, TF195064, 29.iv.1994; in flood litter, Nene Washes, TL274992, 30.i.1998 and Northey Park, TL235987, 11.ix.1996; *Helochaetes lividus* (Forster) (Hydrophilidae), The Boardwalks LNR, TL177983, 20.iii.1991 and Kings Dyke Pit, Whittlesey, TL250976, 3–4.viii.1995; *Enochrus halophilus* (Bedel) (Hydrophilidae), Kings Dyke Pit, Whittlesey, TL250976, 3–4.viii.1995 and Northey Park, TL235987, 11.ix.1996; *Enochrus melanocephalus* (Olivier) (Hydrophilidae), The Boardwalks LNR, TL177983, 20.iii.1991 and Holy Well Ponds, TL168981, 7.ix.1990; *Enochrus isotae* Hebauer (Hydrophilidae), Northey Park, TL235987, 11.ix.1996; *Chaetarthria seminudum* (Herbst) (Hydrophilidae), Dogsthorpe Star Brickpit, TF216027, 6.v.1992; *Berosus signaticollis* (Charpentier) (Hydrophilidae), Moor Drain, TF190068, 5.vi.1994 and Belham Wood, TL156026, 24.iv.1991; *Ochthebius pusillus* Steph., (Hydraenidae), Orton Pits, TL163945, 25.iv.1996; *Hydraena testacea* Curt. (Hydraenidae), Stibbington Pits, TL088993, 6.vi.1993; *Limnebius nitidus* (Marsh.) (Hydraenidae), Ferry Meadows, TL146976, 28.ix.1991 and Kings Dyke Pit, Whittlesey, TL250976, 3–4.viii.1995; *Limnichus pygmaeus* (Sturm) (Limnichidae), Kings Dyke Pit, Whittlesey, TL250976, 3–4.viii.1995 and Norman Cross Pit, TL162908, 16.viii.1997; *Dryops similis* Bollow (Dryopidae), Dogsthorpe Star Brickpit, TF216027, 16.v.1992 and The Boardwalks LNR, TL177983, 12.v.1991; *Oulimnius major* (Rey) (Elmidae), Eye Green Pit, TF231034, 8.iv.1996; *Eubrychius velutus* (Beck) (Curculionidae), Highland Drain, TF195064, 29.iv.1994; *Bagous limosus* (Gyll.) (Curculionidae), Highland Drain, TF195064, 29.iv.1994.

LEVEY, B.—A selection of new and uncommon Coleoptera from Wales. Species marked with an asterisk (*) are thought to be new to Wales. 1) Species collected at Dinefwr Deer Park, Llandeilo, Carm., SN6122: **Leiodes strigipenne* Daffner (Leiodidae), in flight interception trap, 5–12.vi.1996; **Neuraphes praeteritus* Rye (Scydmaenidae), under oak bark, 18.iv.1997, D. J. Mann; **Atheta (Philhygra) debilis* (Erichson) (Staphylinidae), in flight interception trap, 31.v.–5.vi.1996; **Atheta (Enalodroma) hepatica* (Erichson) (Staphylinidae), in flight interception trap, 16–22.v.1996; **Atheta (Bessobia) excellens* (Kr.) (Staphylinidae), in flight interception trap, 16–22.v.1996; **Atheta (Mocyta) negligens* (Muls. & Rey) (Staphylinidae), in Malaise trap, 5–12.vi.1996; **Atheta (Dimetrota) marcida* (Erichson) (Staphylinidae), on Sulphur Polypore fungus, 11.x.1996; **Batrisodes venustus* (Reichenbach) (Pselaphidae), in flight interception trap, 5–21.vi.1996; **Cryptophagus micaceus* Rey (Cryptophagidae), in combined interception trap in lower branches of ancient oak tree, 20–27.ix.1996; **Stephostethus alternans* (Mannerheim) (Lathridiidae), in Malaise trap, 22–31.v.1996, the first British specimen.

2) Species collected at Llanover Estate, Gwent, SO3108; **Quedius microps* Grav. (Staphylinidae), in wood mould in hollow beech tree, 30.v.1996; **Euplectus kirbyi* Denny (Pselaphidae), in flight interception trap, 6–26.vi.1996; **Euplectus bonvouloiri* Reitter subsp. *rossae* Raffray (Pselaphidae), in flight interception trap, 30.v.–13.vi.1996; *Clambus simsoni* Blackburn (Clambidae) in pile of shredded bark, 10.x.1996, recently added to the British list by Colin Johnson; **Clitostethus arcuatus* (Rossi) (Coccinellidae), in Malaise trap, 30.v.–6.vi.1996.

3) Species collected at St. Fagans, Glam., ST1177: *Epiphanis cornutus* Eschscholtz (Eucnemidae), in combined interception trap in lower branches of ancient oak tree, 24.vi–9.vii.1997 & 16–24.vii.1997; *Orthoperus atomus* (Gyll.) (Corylophidae), in flight interception trap, 16–24.vii.1997; **Mordellistena neualdeggiana* (Panz.) Mordellidae, in flight interception trap, 24.vii.–25.viii.1997.

4) Species collected from other sites in Wales: **Ptinella taylorae* Johnson (Ptiliidae), under bark of fallen beech tree, Plymouth Great Wood, ST1276, Glam. 16.vii.1997; **Aleochara verna* Say (Staphylinidae), in sheep dung, Cefn Gwrhyd, SN7207, Glam., 23.vi.1997.

MORRIS M. G.—Continental examples of some extinct, very rare, erroneous, dubious and possibly fraudulent British weevils (Coleoptera, Curculionoidea). *Rhynchites auratus* (Scop.) (Attelabidae), male, near Ledignan (Gard), France, 18.iv.1989, female, Siñues (Pyrenees), Spain, 23.v.1979, extinct in the British Isles (Last record c. 1850), larvae feed in fruits of roseaceous shrubs, especially *Prunus spinosa*; *Rhynchites bacchus* (L.) (Attelabidae), male and female, near Pestani, Macedonia, 12.v.1990, extinct in the British Isles (last recorded in 1843 from Birch Wood, Kent), larvae feed in fruits of *Prunus spinosa*; *Ceratapion armatum* (Gerst.) (Brentidae), Galicica National Park, Macedonia, 17.vi.1990, one genuine record from the New Forest in 1941, associated with *Centaurea* spp.; *Oxystoma opeticum* (Bach) (Brentidae), male and female, Valserine (Ain), France, 1.vi.1983, erroneously included in Fowler (1891) (a misidentification), larvae feed in the pods of *Lathyrus vernus* (not British); *Squamapion minutissimum* (Rosenhauer) (Brentidae), Monte Griano (Rieti), Italy, 11.vii.1990 (leg. M. Russell), recorded erroneously from South Wales (misidentifications of *S. atomarium*); *Otiorhynchus morio* (F.) (Curculionidae), Obertauern, Germany (?), 15–17.viii.1959 (leg. Papperitz), very rare and possibly extinct in Britain (last recorded in 1941 from N. W. Scotland—Kidson-Taylor, 1906); *Otiorhynchus coecus* Germar (= *niger* (F.)) (Curculionidae), male, Forêt de la Joux (Jura), 19.v.1992, and female, Col de la Faucille (Jura) 1.vi.1983, recorded once in Britain from Rockingham Forest, Northants. (Thompson and Styles, 1959); *Peritelus sphaeroides* Germar (Curculionidae), Villard (Isère), France, 4.vi.1983, extinct or casual (there is a definite male in the National Collection—Donisthorpe, 1904); *Polydrusus impar* Gozis (Curculionidae), Cave del Predil (Friuli), Italy, 24.vi.1990, probably introduced into Britain, one specimen from Rockingham Forest, Northants., 1950 (Thompson, 1959); *Polydrusus prasinus* (Oliver) (Curculionidae), S. Juan de la Peña (Pyrenees), Spain, 17.v.1977, erroneously recorded as British (e.g., Fowler, 1891, as *planifrons* Gyll.), some records are possibly fraudulent; *Eusomus ovulum* Germar (Curculionidae), Baigneux-des-Juifs (Côte d'Or), France, 4.vi.1997, erroneously recorded as British (Sharp, 1871), probably a mistake for *Polodrusus pulchellus* Steph.; *Chromoderus affinis* (Schränk) (Curculionidae), Barres des Cévennes (Lozère), France, 29.viii.1991, few British records, either extinct or casual only (?immigrant), (last recorded from the New Forest in 1936); *Lixus angustatus* (F.) (= *algerius* auctt.) (Curculionidae), near Vejea (Cadiz), Spain, 4.iv.1992, possibly extinct, though formerly quite common in the Fairlight district of E. Sussex (last recorded in 1923 by R. S. Mitford); *Lixus elongatus* (Goeze) (Curculionidae), near Ariany, Majorca, 14.iii.1992, erroneously recorded as British, possibly fraudulent, (supposedly taken in Wilts. in 1864 but Rye (1865) was not responsible for the fraud); *Lixus iridis* (Oliver) (Curculionidae), S. Michel-en-l'Herm (Vendée), France, 2.v.1984, either erroneously British or long since extinct (one example in the Power collection taken in 1836, locality uncertain); *Lixus villis* Rossi (Curculionidae), Ajaccio, Corsica, 10.v.1988, and Bretignolles-s-Mer (Vendée), France, 26.v.1994, extinct in Britain, formerly on south coast sand dunes (e.g.

Sandwich, Kent) last recorded in 1905, larvae feed in stems of *Erodium cicutarium*; *Hypera arundinis* (Paykull) (Curculionidae), Suserne, Denmark, 13.vii.1988, (leg. E. Palm), extinct in the British Isles (there are a few early 19th century records), the host plant is *Sium latifolium*; *Lepyrus capucinus* (Schaller) (Curculionidae), near Leipzig, Germany, 13.iv.1969, (leg. Dieckmann), very rare and probably extinct in the British Isles (there are a few early 19th century records from southern England) the Moray record mentioned by Hyman (1992) is probably erroneous; *Datonychus arquatus* (Herbst) (Curculionidae), near Ereniuc (Danube Delta), Roumania, 6.v.1995, very rare in the British Isles (most specimens are from L. Neagh), recently discovered in S. Wales, associated with *Lycopus europaeus* and *Mentha aquatica*; *Sibinia pellucens* (Scop.) (Curculionidae), Nancras (Charente-Maritime), France, 30.iv.1984, very doubtfully British (the two 19th Century records are possibly fraudulent, associated with *Silene latifolia*); *Ellescus scanicus* (Paykull) (Curculionidae), (country of origin and collector of specimen exhibited unclear), 16.v.1985, doubtfully British (one mid-19th century record from Lincs and a dubious Irish record); *Gymnetron melas* Boheman (Curculionidae), near Staßfurt, Germany, 31.vii.1986, (Dieckmann et Behne leg.), erroneously recorded as British by Donisthorpe (his specimen is *G. pascuorum* (Gyll.)); *Rhynchaenus lonicerae* (Herbst) (Curculionidae), Forêt de la Joux (Jura), France, 19.v.1992, not seen in the British Isles for 160 years and very doubtfully indigenous, associated with *Lonicera xylosteum*; *Rhynchaenus erythropus* (Germar) (Curculionidae), Montagnac (Gard), France, 18.iv.1989, recorded as British on the basis of larval leaf mines on *Quercus ilex* (however it is now believed that the mines were made by the common *R. signifer* (Creutzer) (= *avellanae* (Donovan))); *Rhynchaenus sparsus* Fähræus (Curculionidae), Uchaux (Vaucluse), France, 22.viii.1996 (all four British records of this oak-feeding species are erroneous, being either *R. signifer* (Creutzer) (= *avellanae* (Donovan) or *R. pilosus* (F.)).

PAVETT, P. M.—A collection of aquatic Coleoptera, mostly taken during 1997, from South Wales, Halipidae: *Brychius elevatus* (Panz.); *Peltodytes caesus* (Duft.); *Halipus confinis* Steph.; *H. flavicollis* Sturm; *H. fulvus* (F.); *H. heydeni* Wehncke; *H. immaculatus* Gerhardt; *H. lineatocollis* (Marsh.); *H. ruficollis* (Degeer); *H. wehncke* Gerhardt; Hygrobiidae: *Hygrobia hermanni* (F.); Noteridae: *Noterus clavicornis* (Degeer); Dytiscidae: *Laccophilus hyalinus* (Degeer); *L. minutus* (L.); *Hyphydrus ovatus* (L.); *Hydroglyphus pusillus* (F.); *Bidessus minutissimus* (Germar); *Hygrotus inaequalis* (F.); *H. versicolor* (Schaller); *Coelambus impressopunctatus* (Schaller); *C. confluens* (F.); *Hydroporus angustatus* Sturm; *H. discretus* Fairmaire; *H. erythrocephalus* (L.); *H. incognitus* Sharp; *H. gyllenhali* Schioedte; *H. striola* (Gyll.); *H. longulus* Mulsant; *H. memnonius* Nicolai; *H. nigrita* (F.); *H. obsoletus* Aubé; *H. palustris* (L.); *H. planus* (F.); *H. pubescens* (Gyll.); *Hydroporus tessellatus* Drap.; *Suphrodytes dorsalis* (F.); *Stictonectes lepidus* (Ol.); *Graptodytes granularis* (L.); *Graptodytes pictus* (F.); *Porhydrus lineatus* (F.); *Nebrioporus depressus elegans* (Panz.); *Stictotarsus duodecimpustulatus* (F.); *Oreodytes sanmarki* (Sahlb.); *O. septentrionalis* (Sahlb.); *Copelatus haemorrhoidalis* (F.); *Platambus maculatus* (L.); *Agabus bipustulatus* (L.); *A. didymus* (Ol.); *A. guttatus* (Paykull); *A. montanus* Zimm.; *A. nebulosus* (Forst.); *A. paludosus* (F.); *A. sturmii* (Gyll.); *Ilybius aenesens* Thoms.; *I. ater* (Degeer); *I. fuliginosus* (F.); *I. guttiger* (Gyll.); *I. quadriguttatus* (Lac. & Boisd.); *Rhantus graepi* (Gyll.); *R. suturalis* (Macleay); *Colymbetes fuscus* (L.); *Hydaticus transversalis* (Pont.); *Acilius sulcatus* (L.); *Dytiscus dimidiatus* Berg. *D. marginalis* L. *D. semisulcatus* Müller.

PORTER, D. A.—Three species of Coleoptera, all of which are new county records. *Langelandia anophthalma* Aubé (Colydiidae), one in an underground trap baited with a mixture of sherry and vinegar, set in a garden situation at Bridport, Dorset,

SY462935, viii.1995 to 31.x.1996 (and five specimens in the same trap during 1997); *Raymondionymus marqueti* Aubé (Raymondionymidae), one in the above trap, Bridport, Dorset, SY462935, 19–30.viii.1997, a considerable westerly extension of its known British range; *Gronops inaequalis* Boheman (Curculionidae), one in vacuum sample from area of sand and shingle (*Atriplex* or *Chenopodium* species are likely host plants), The Crumbles near Eastbourne, East Sussex, TQ644020, 14.xi.1996, the second British site.

HEMIPTERA

ALEXANDER K.N.A.—1. A selection of the more interesting bugs found during the work of the National Trust's Biological Survey Team in 1997: *Scirius dubius* (Scopoli) (Cydnidae), Ventnor Downs, Isle of Wight, 20.v.1997; *Odontoscelis lineola* Rambur (Scutelleridae), Brancaster Dunes, West Norfolk, 10.ix.1997; *Metopoplax ditomoides* (Costa) (Lygaeidae), Waddesdon, Bucks, 30.vi.1997, one swept from ox-eye daisy; *Adelphocoris ticinensis* (Meyer-Dür) (Miridae), Petworth Park, West Sussex, 4.viii.1997. 2. A selection of the more significant finds from the year's recording in Gloucestershire: *Macroplax preyssleri* (Fieber) (Lygaeidae), Swift's Hill Nature Reserve, 20.iv.1997, third county locality; *Berytinus minor* (Herrich-Schaeffer) (Berytinidae), 16.viii.1997, first record for many years, and *Catoplatys fabricii* (Stål) (Tingidae), 26.v.1997, both from Bisley Road Cemetery, Stroud.

BADMIN, J.—1. An exhibit showing oviposition behaviour in the rhododendron leafhopper, *Graphocephala fennahi* Young (Cicadellidae). Females lay eggs in the bud sheaths of developing flower buds, and appear to lay more eggs in large flower buds, usually those at the stem apex, where the eggs receive most sunlight. 2. An exhibit of the oak leafhopper *Iassus lanius* (L.) (Cicadellidae). A widespread species in Britain, occurring in two colour forms: green and brown. The green form tends to occur most frequently on leaves and the brown form on stems. Sampling of live fallen trees in 1988, following the storm of October 1987, showed that many more specimens were found in the higher canopy than in the lower branches.

HAWKINS, R. D. & MENZIES, I.S.—Adults and nymphs of *Gonocerus acutisulcatus* (Goeze) (Coreidae). This RDBI species was for many years restricted to the immediate area of Box Hill, Surrey, and was believed to feed exclusively on *Buxus*. In 1990 it was found at Bookham (by ISM). Further records have since been found by RDH (all VC17): 1.iv.97, Mallow Downs, TQ028499; 15.vi.97, TQ224585, Epsom Downs; 11.viii.97, Woodlands Park, NW Leatherhead, TQ146584. Nymphs have been found on various plants of the Rosaceae; adults appear to move to box and yew for the winter.

HODGE, P. J.—Four species of Hemiptera from south-east England. New vice-county records are marked with an asterisk (*). **Emblethis denticollis* Horváth (Lygaeidae), Hoyle, West Sussex, SU9018, 9.vii.1997, one male on fence post; **Metopoplax ditomoides* (Costa) (Lygaeidae), Windsor Great Park, Berkshire, SU9472, 2.vi.1996, swept, and Thornham Point, Southbourne, West Sussex, SU7604, 1.vii.1997, swept; **Iassus scutellaris* (Fieber) (Cicadellidae), Hoyle, West Sussex, SU9018, 30.vii.1997, two swept off English elm *Ulmus procera* bush; *Oliarus panzeri* Loew (Cixiidae), Windsor Great Park, Berkshire, SU9773, 24.vi.1997, swept.

KNILL-JONES, S.A. Specimen of *Ledra aurita* (L.) (Cicadellidae), Freshwater, IoW, 22.viii.97, taken at light.

HYMENOPTERA

ALBERTINI, M.—A local anthophorid bee, *Melecta albifrons* (Forster), taken in a garden at Burnham, Bucks. on 3.v.97. This was the first sighting by the exhibitor in a

garden he has known for 20 years. Further specimens were seen in subsequent weeks with a maximum of five on 26.v.97. This bee was also seen on 3.v.97 in a garden at Maidenhead, Berks. The host bee, *Anthophora* sp., is rarely seen at either site.

ARCHER, M. E. —(a) Some aculeate bees and wasps from France and Crete. Female *Sceliphron destillatorium* (Ill.), 14.viii.93, Castlenaud, Dordogne, France. Female *Ectemnius fossorius* (L.), 1.viii.90, La Reole, Gironde, France. Female *Gorytes quinque. cinctus* (F.), 17.vii.95, Pont d'Alleyras, Haute Loire, France. Female *Bembix rostrata* (L.), 2.viii.90, Pissos, Landes, France. Male *Cerceris sabulosa* (Panz.), 26.vii.95, Sonzay, Maine-et-Loire, France. Female *Dinetus pictus* (F.), 17.vii.95, female *Tachytes panzeri* Duf., 22.vii.95 and female *Heriades truncorum* (L.), 15.vii.96 at Pont d'Alleyras, Haute-Loire, France. Male *Lestica clypeata* (Schreb.), 29.vii.90, Fôret de Mervent, Vendée, France. Female *Trypoxylon fronticorne* (Gussakovskij), 29.viii.73, Menil, near Château-Goutier, Sarthe, France. Male *Xylocopa iris* (Christ) and female *Osmia latreillei* (Spin.), 11.iv.88, Kato Zakros, Crete. Female *Epeoloides coecutiens* (F.), 10.viii.90, Fôret de Fougères, Ille-et-Vilaine, France. Female *Ceratina cucurbitina* (Rossi), 13.vii.95, Courmemin, Loire-et-Cher, France. Male *Ceratina cyanea* (Kirby), 20.viii.87, near Meilham, Marmande, Gironde, France. Female *Osmia cornuta* (Lat.), 26.iii.94, Pizay, Rhône, France. Female *Lithurgus chrysurus* Fonscombe, 8.viii.93, near Soulares, Dordogne. Male *Trachusa hyssina* (Panz.), 19.vii.95, near Naussac, Haute-Loire, France. Female *Halictus quadricinctus* (F.), 16.viii.79, La Turballe, Loire-Atlantique, France. Female *Halictus subauratus* (Rossi), 6.viii.93, St Cernin de l'Herm, Dordogne, France. Female *Halictus pollinosus* Sichel, 9.iv.96, Paliochora, Crete.

(b) Some local British aculeate bees and wasps, mostly taken in 1996. A gynandromorph *Halictus confusus* Smith, male *Colletes marginatus* Smith, male *Dasygaster altercator* (Harris), *Hedychridium cupreum* (Dahlbom), male *Oxybelus mandibularis* Dahlbom and *O. argentatus* (Curt.), 18.vii.96, Thetford Warren Lodge, Norf.; *Omalus violaceus* (Scop.), viii.96, Leicester, Leics.; female *Philanthus triangulum* (F.) and *Nomada fulvicornis* (F.), 18.viii.96, male *Andrena bimaculata* (Kirby), 22.vii.96, female *Lasioglossum brevicorne* (Schenck), 18.vi.96, Highgate Common, Staffs.; female *Hylaeus signatus* (Panz.), 17.viii.96, Hartlebury Common, Wores.; female *Colletes cunicularius* (L.), 8.vi.96, Sandscale Haws, Cumbria; male *C. similis* Schenck, 16.vii.96, Kirkby Moor, Lincs. (new to the county); male *Andrena humilis* Imhoff, female *Sphecodes crassus* Thom., male *Nomada pleurosticta* H.-S., 14.vi.96, Cannock Chase—Brockton, Staffs.; female *Nomada lathburiana* (Kirby), 14.vi.96, Cannock Chase—Penkridge, Staffs.; female *Andrena humilis* Imhoff, 17.vi.96, Duckpool, Corn.; male *Andrena fulvago* (Christ), 26.vi.96, Porthcurno, Corn.; female *Lasioglossum brevicorne* (Schenck) and female *Megachile leachella* Curt., 18.vii.96, Roydon Common, Norf.; female *Nomada pleurosticta* H.-S., 19.vi.96, Penhale Dunes, Corn.

BARCLAY, M. V. L. AND MANN, D. J.—Four rare and localized Hymenoptera identified from an unbaited pitfall trap on vegetated shingle, Denge Marsh, Dungeness, Kent, TR0118, June 1997. The very rare emboleimid *Embolemus ruddii* Westwood, a single female; the ants *Myrmica specioidea* Bondroit, *Leptothorax tuberum* (F.) and *Leptothorax interruptus* (Schenk).

COLLINS, G. A.—Some rare and notable bees taken 1995–97, mainly in Surrey. *Nomada xanthosticta* (Kirby), 26.iv.96, Thorpe Lea, Surrey; *N. fulvicornis* F., 11.iv.97, Addington, Surrey, *N. hirtipes* Perez, 2.v.97, Riddlesdown Quarry, Surrey; *N. fucata* Panz., 8.vi.97, North Holmwood, Surrey; *Andrena hattorfiana* (F.), 22.vii.97, Cotley Hill, S. Wilts.: *A. florea* F., 23.vi.96, Milford, Surrey; *A. tibialis* (Kirby), 21.iv.96, South Croydon, Surrey; *Osmia pilicornis* Smith, F., 2.v.97, Oaken

Wood, Surrey; *Hylaeus cornutus* Curt., 24.vi.95, Guildford, Surrey; *Eucera longicornis* (L.), 6.vi.97, Hambledon, Surrey.

EDMUNDS, H. A.—The rediscovery of the cimbicid sawfly, *Cimbex connatus* (Schr.) in Britain (Plate VI, Fig. 17). A female was found on 29.vii.97 in a water meadow west of Salisbury, Wilts. This is the first record for the county of an insect not recorded in Britain since 1904, although it does occur in Eire. It has larvae that feed on alder foliage. The sawfly was found in short grass and when disturbed it adopted a threatening attitude and made a buzzing sound with rapid wing movements. This could be mimicry of a hornet and a specimen of this insect was also shown.

FOSTER, A. P.—A selection of the more interesting solitary bees recorded by the National Trust's Biological Survey Team in 1997. *Macropis europaea* Warncke, 5.viii.97, at flowers of *Lysimachia vulgaris*, Runnymede, Surrey; *Andrena fulvago* (Christ), 5.vi.97, female at flowers of *Hieracium pilosella*, Collard Hill, Som.; *Andrena humilis* Imhoff, 3.vi.97, female at flowers of *Leontodon*, Langdon Cliffs, Dover, Kent; *Andrena labiata* F., 27.v.97, female at flowers of *Veronica chamaedrys*, A la Ronde, Devon; *Lasioglossum xanthopum* (Kirby), 3.vi.97, Langdon Cliffs, Dover, Kent.

HALSTEAD, A. J.—Some local sawflies taken in 1997. Pamphiliidae: male *Cephalcia lariciphila* (Wachtl), 8.vi.97, swept near larch trees, Tack Wood, Breck.; female *Pamphilus inanitus* (Villers), 26.v.97, in a garden, Royston, Herts. Cimbicidae: female *Trichiosoma sorbi* Hartig, 10.vi.97, Blaen y Cwm, Mynydd du Forest, Breck. Cephidae: male *Hartigia xanthosoma* (Evers.), 10.vi.97, Cwm Coed y Cerrig, Mon. Diprionidae: female *Gilpinia virens* (Klug), emerged 21.vi.97, bred from a larva on *Pinus sylvestris*, Brentmoor Heath, near West End, Surrey. Tenthredinidae: male *Selandria sixii* Vollenhoven, 11.vi.97, Sirhowy Valley Country Park, near Cwmfelinfach, Glam.; female *Athalia rosae* (L.), 23.viii.97, a migrant species in a garden, Knaphill, Surrey; male *Heterarthrus ochropoda* (Klug), 10.v.97, on aspen leaf, Basingstoke Canal, NE of Woking, Surrey; male *Caliroa tremulae* Chevin, 21.vi.97, swept from aspen, Whitmoor Common, near Guildford, Surrey; female *Tenthredo velox* F., 10.vi.97, Blaen y Cwm, Mynydd du Forest, Breck.; female *Croesus varus* (Villaret), 8.vi.97, col. K. Merrifield, River Usk at Llanwenarth, Mon.; female *Amauronematus amplus* Konow, 12.iv.97, swept from birch, Whitmoor Common, near Guildford, Surrey.

HODGE, P. J.—Some Hymenoptera, mostly aculeates, taken in south-east England in 1997. Chalcididae: *Chalcis biguttata* Spin., 1.vii.97, on wild carrot flower, Thornham Point, Southbourne, W. Sussex (new vice-county record). Chrysididae: *Chrysogona gracillima* (Foerst.), 9.vii.97, on a fence post, Ashted Common, Surrey, 14.vii.97, on dead oak trunk, Fawley, S. Hants.; *Omalus violaceus* (Scop.), 25.viii.97, swept from *Salix fragilis*, Lewes, E. Sussex. Sphecidae: *Alysson lunicornis* (F.), 23.vii.97, male swept from steep south-facing grassy bank, Pebsham Wood, Bexhill

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PLATE VI ANNUAL EXHIBITION 1997

1: *Opistograptis luteolata*, Church Cove, Lizard, Cornwall, 6.x.97, P. Sharpe. 2: *Zygaena trifolii palustrella*, Edge Common, Glos., 20.vi.96, P. Sharpe. 3: *Acleris literana*, Binstead, IOW, 14.v.97, B. Warne exhib. S. A. Knill-Jones. 4: *Cerapteryx graminis* ab., Dalwhinnie, Easternness, 11.viii.97, A. Batten. 5: *Spilosoma lubricipeda*, Dymchurch, Kent, 29.v.97, J. Owen. 6: *Vitula edmandsii* Spurn, E. Yorks., 8.vii.97, H. E. Beaumont. 7: *Ochropleuro flammata*, Eswick, Shetland, 28.vi.97, T. Rogers exhib. B. Skinner. 8: *Opistograptis luteolata*, Dymchurch, 11.viii.95, J. Owen. 9: *Semiothisa alternaria*, melanic, Greatstone, Kent, 1.vii.97, S. Clancy. 10: *Cyclophora linearia*, Park Hill, Hants, 29.vii.97, R. McCormick. 11: *Arctia caja* Lizard, Cornwall, 10.viii.96, R. Howard. 12: *Hecatera dysodea*, Gravesend, Kent, 28.vi.96, D. Agassiz. 13: *Callimorpha dominula*, Leckford, Hants, J. Clarke. 14: *Chloroclystis rectangulata*, nr Dawlish, Devon, 6.vi.97, R. McCormick. 15: *Arygnnis adippe*, female melanic, Dartmoor, Devon, bred F4, 22.vi.96, T. Rouse. 16: *Hyloicus pinastri*, E.C.L. Simson. 17: *Cimbex connatus*, 29.vii.97, nr Salisbury, Wilts, H. Edmunds.



ANNUAL EXHIBITION 1997

on Sea, E. Sussex; *Mimumesa unicolor* (V. d. Lind.), 1.vii.97, swept from flowery grassland, Thornham Point, Southbourne, W. Sussex; *Pemphredon morio* (V. d. Lind.), 14.vi.97, swept, Friston Forest, E. Sussex. Apidae: *Andrena hattorfiana* (F.), 29.vii.97, on field scabious, *Knautia arvensis* flower, South Heighton, E. Sussex.

HONEY, M. R.—A pteromalid parasite, *Kranophorous pachycerus* (Masi) bred from a pupa of the meadow brown butterfly, *Maniola jurtina* (L.). The pupa was collected 8.vi.97 in Southfields, London and about 30 of the parasites emerged through a single hole 24–25.vi.97. They were identified by Dr. J. Noyes (NHM) who confirmed this was the first host record for this species, which was previously known only from two females (Portland, Dorset, 24.vii.1935 and Wytham Wood, Berks., 31.x.1953).

MILES, S.—Some interesting aculeates taken in recent years. Chrysididae: *Chrysis fulgida* L. A female was taken by the exhibitor on heathland edge, Aldershot, Hants. in 1988, the first for 40 years. The male exhibited was taken at the BENHS field meeting at Castle Bottom SSSI, Eversley Common, Hants. in 1995. This is about 10.5 km NW of the previous site and adds a second 10 km square to its known distribution. The exhibitor believes that this insect requires dead wood and is associated with sphecids wasps of the *Trypoxylon* genus; *Hedychrum niemelai* Linsenmaier, both from Dorset heaths. Apidae: *Andrena proxima* (Kirby) taken on a S. Devon coastal site where one of its pollen plants, cow parsley, *Anthriscus sylvestris* was growing; *Eucera longicornis* (L.)—the exhibitor queries whether this has become more widespread in southern England as a result of the recent hot dry summers. He had added four new grid squares in W. Sussex to S. Falk's 1991 distribution map by surveying roadside verges. The features of inland *E. longicornis* sites appear to be land below 50 m a.s.l. with clay or sandy clay soils and large amounts of meadow pea, *Lathyrus pratensis* L. The males fly over this plant as they search for females.

PORTER, D. A.—A single female *Pamphilus sylvarum* (Steph.) was beaten from an oak sapling, 10.v.80, at Milton Hide, Hailsham, E. Sussex. This is an uncommon pamphilid sawfly that the exhibitor has not encountered since.

SMITH, M. N.—A selection of uncommon bees and wasps taken in 1997. Apidae: *Andrena bimaculata* (Kirby), 10.iv.97, California Country Park, Finchamstead, Berks.; *A. bucephala* Steph., 3.v.97, The Warburg Reserve, Bix Bottom, Oxon.; *A. humilis* Imhoff, 15.v.97, nesting in bare soil created by a rabbit scrape in chalk grassland, Hartslock Reserve, Goring, Oxon.; *A. labiata* F., 29.v.97, flying over patches of speedwell, *Veronica* sp., Padworth College, Padworth, Berks.; *A. marginata* F., 6.vii.97, on scabious, Primrose Hill, Bath, Avon; *A. trimmerana* (Kirby), 28.iii.97, investigating the gaps between newly laid turves on a roadside bank, ICI Severnside Estate, Severn Beach, S. Glos.; *Nomada pleurosticta* H.-S., 15.v.97, flying over and entering the burrows of *Andrena humilis* Imhoff, Hartslock Reserve, Goring, Oxon.; *N. xanthosticta* (Kirby), 10.iv.97, flying over an earth mound at woodland edge, California Country Park, Finchamstead, Berks.; *Osmia bicolor* (Schr.), 3.v.97, flying over chalk grassland at woodland edge, The Warburg Reserve, Bix Bottom, Oxon. Sphecidae: *Pemphredon morio* V. d. Lind., 6.vii.97, flying around a moribund horse chestnut tree, Primrose Hill, Bath, Avon. Eumenidae: *Odynerus melanocephalus* (Gmel.), no date, ICI Severnside Estate, Severn Beach, S. Glos. Sapygidae: *Sapyga clavicornis* (L.), 6.vii.97, flying around a moribund horse chestnut tree, Primrose Hill, Bath, Avon.

MOLLUSCA

SHARDLOW, M.—A live specimen of the slug *Limax cinereoniger* Wolf, Wolves Wood RSPB reserve, Suffolk.

ARACHNIDA

SHARDLOW, M.—A specimen of the spider *Donacochara speciosa* (Thorell) collected in 1996 at Strumpshaw Fen, Norf.

ILLUSTRATIONS

The Editor greatly regrets that the notes on exhibits sent to the recorder failed to arrive. Anyone wishing to have their exhibit noted should supply duplicate notes for inclusion with the 1998 reports.

BENHS INDOOR MEETINGS

13 January 1998

Mr A. J. HALSTEAD showed a specimen of the chloropid fly *Platycephala umbraculata* (F.) taken on 13.vii.97 at Charmouth landslip, Dorset. This is a very local species associated with *Phragmites* growing in landslip situations along the south coast of England.

Mr C. E. DYTE showed two dolichopodid flies. A male *Syntormon silvanus* Parvu was taken on 11.vi.84 in Dan Wood Nature Reserve in the Black Isle, north of Inverness. This species, which was previously confused with *S. monilis* (Haliday), was first recorded in West Sussex and Kent by Hodge (1996, *Br. J. Ent. Nat. Hist.* 9: 231). The Black Isle specimen was thought to be the first Scottish record but re-examination of specimens in the Natural History Museum shows that specimens had been taken at Nethy Bridge, Loch Assynt and Bonhill by Yerbury and Malloch in 1904–11. A more local species, *Dolichopus strigipes* Verrall, was also exhibited. This is largely restricted to coastal saltmarshes from Devon to Norfolk. The two males shown were found on a window on B deck of a cross-channel ferry midway between Dover and Calais on 25.vi.92. This illustrates how a relatively local species can be distributed by man.

Mr R. D. HAWKINS showed two specimens of the soldier fly *Stratiomys potamida* (Mg.), to show differences in colour after death, possibly due to different methods of drying. One specimen, set and dried in the conventional manner at room temperature in summer, showed bad fading of its colour. The other specimen had been kept in a deep freeze until a bitterly cold day in October, when it had been dried in a cold draught from a window. The bright yellow areas of the abdomen had retained their colour.

Mr R. W. J. UFFEN showed a copy of the Provisional Atlas of British Tephritidae with an additional spot added to indicate a new county record of *Myopites inulaedyssentericae* Blot for Hertfordshire. The locality is an isolated alkaline spring-fed fen at the Commons, Welwyn Garden City.

Dr J. MUGGLETON noted that membership of the Society was now at a record 815 and wondered whether it could be increased to 900 by the year 2000.

Mr A. J. HALSTEAD claimed the first hoverfly of the year, *Episyrphus balteatus* (Degeer) visiting flowers of witch hazel, *Hamamelis* sp., at the Royal Horticultural Society's Garden, Wisley, Surrey on 9.i.98. Mr M. N. Smith reported seeing a queen *Bombus terrestris* (L.) during the previous week. Dr C. M. Drake had noted a small tortoiseshell butterfly and a dung beetle, *Geotrupes* sp., at Cambridge Botanic Garden. Mr R. Softly said that his light trap had not recorded any spring moths emerging early but he had caught a two-spot ladybird covered in sand grains.

Three speakers then spoke on aspects of the history, development and activities of the Dipterists' Forum.

Mr A. E. STUBBS described the origins and history of the Forum. It grew out of recording schemes supported by the former Nature Conservancy Council and the Biological Records Centre. Cut-backs in government funding and changes in the organization of the government conservation agencies meant that the recording schemes had to become self-supporting. The decision was taken to affiliate the Forum to the BENHS rather than set up an additional entomological society. This has helped keep down costs and avoided some duplication of the management required in running societies. The principal activity of the Forum is recording the distribution of flies in the British Isles. A series of one-day field meetings are held each year, with a week-long summer meeting and a long-weekend autumn meeting. This enables areas where few dipterists live to be covered, as well as the more intensively recorded parts of southern Britain. Mr Stubbs discussed various means of making records, noting that some flies are more readily found as larvae rather than adults. The 1998 summer meeting is at Dorchester, Dorset.

Dr C. M. DRAKE described the dipteran recording schemes that are currently active. These cover crane-flies, hoverflies, larger Brachycera, sepsids, dioxids, conopid flies, sciomyzids, mosquitoes, fungus gnats, tephritids and otitids. The hoverfly scheme has the largest number of records with around one-third of a million. There are also study groups for some other groups of flies, such as the dolichopodids and empids. The dot maps produced by the schemes show geographic patterns of distribution and can also illustrate species whose distribution is increasing or declining. Other activities of the Forum and its members include producing identification keys and running study days, demonstrating field craft, making studies of the biology and ecology of flies, discovering species new to Britain or to science, and making donations of specimens to museums. The Forum is now responsible for running the recording schemes for flies. In the future there will need to be more emphasis on studying the ecology and behaviour of flies, rather than just compiling dot maps. More recording schemes may be developed but there is a danger of having too many schemes which may spread the activities of recorders too widely.

Mr R. K. MERRIFIELD showed some slides taken while attending the Dipterists' summer field meetings over a 24 year period starting at Rogate in 1974. These showed a variety of insects, people, sites and collecting techniques.

24 February 1998

Mr A. J. HALSTEAD showed a live specimen of the chrysomelid beetle, *Chrysolina americana* L. A single specimen was spotted on 21.ii.98 by Mr R. K. Merrifield on a rosemary plant (*Rosmarinus officinalis*) planted outside the Pelham-Clinton building at Dinton Pastures Country Park, Berkshire. This insect is of southern European origin and this is only the fourth British record. Mr Halstead also showed a lacebug new to Britain. This is *Stephanitis takeyai* Drake & Mao (Hemiptera: Tingidae) which feeds by sucking sap from the foliage of the garden shrub *Pieris japonica*. Samples had been sent to the exhibitor from The Savill Garden, Windsor Great Park, Berkshire in January 1998.

Mr and Mrs R. K. MERRIFIELD showed a specimen of the tephritid fly *Goniglossum wiedemanni* (Mg.) collected on a Gwent Wildlife Trust reserve (Rogiet Poor Land) during the Dipterists' Forum summer meeting in June 1997. This local species has larvae that develop in the berries of white bryony, *Bryonia dioica*.

The following persons have been approved by Council as members: Ms Alison J. Haughton, Mr David J. P. Miller, Mr John Owen and Mr Philip M. Pavett. The Leicestershire Museum Service has become a corporate member.

The exceptionally mild weather in February brought a flurry of early insect sightings. Dr M. Wilson reported that a silver-striped hawkmoth, *Hippotion celerio* (L.), had been recorded at light in the early hours of 15 February at Kenfig National Nature Reserve, Glamorgan. Mr I. Sims said that Mr D. O'Keefe had told him of two others being taken on the south coast of England at that time. Dr P. Waring noted that there had been a deposition of sub-Saharan dust in the west country on St Valentine's Day. He had noted rush veneer moth, *Nomophila noctuella* (D. & S.) at Adrigole, Co. Cork, as well as early emergences of resident species including the early thorn, *Selenia dentaria* (F.). In his own garden at Werrington, Cambridgeshire, Dr Waring had recorded *Orthosia gothica* (L.), *O. incerta* (Hufn.), *O. cerasi* (F.) and pale brindled beauty *Apocheima pilosaria* (D. & S.), which do not usually emerge until March. He also had a record of the small tortoiseshell butterfly in Belfast on 11 February and the pyralid moth *Euchromius ocella* (Haw.) at the Treborth Botanic Garden, Bangor, North Wales on 10 January. Dr I. McLean reported seeing two peacock butterflies in the Joint Nature Conservancy Council car park at Peterborough on 13 February. Mr R. Kemp reported seeing a small tortoiseshell and pale brindled beauty in Aylesbury, Buckinghamshire on 17 February.

The Ordinary Meeting was then followed by the AGM, Officers' Reports (published in *Br. J. Ent. Nat. Hist.* 11(1)) and Presidential Address. Afterwards Dr Agassiz invited the new President, Mr B. C. Eversham, to take the chair.

10 March 1998

Mr R. W. J. UFFEN showed a live female of the solitary bee *Andrena clarkella* (Kirby) that he had collected at a sand pit near Welwyn Garden City, Hertfordshire. He noted that goat willow, *Salix caprea*, which this bee uses as its principal pollen source, has been flowering early this year and many of the catkins had already gone over.

The following persons have been approved by Council as members: Mr S. Saxton, Mr K. R. Tuck and Mr P. F. G. Vigus.

Mr S. R. MILES made available for inspection the reports of observer bodies presented at the recent Joint Committee for Conservation of British Invertebrates (JCCBI) meeting. These describe the conservation activities of organizations such as the Countryside Council for Wales, the Natural History Museum, the National Biodiversity Network and the National Trust. These and other JCCBI papers are kept on file in the Society's library at Dinton Pastures. Also displayed was a paper produced by Wildlife and Countryside Link entitled 'Wildlife law—time for reform'. There was also a report on Fisher's estuarine moth giving details of a survey of Essex coastal sites where the caterpillar's food plant occurs. Volunteers are needed to continue monitoring sites.

Mr R. A. SOFTLY reported seeing a speckled wood butterfly in a sheltered railway cutting at Hampstead, London on 9 March.

Mr M. EDWARDS spoke on the origins and development of BWARS—the Bees, Wasps and Ants Recording Scheme (in 1995 changed to Society). BWARS grew out of the bumblebee distribution mapping scheme co-ordinated by David Alford in the 1970s. It was launched in 1978 and began holding summer field meetings, and published newsletters and provisional distribution maps for social wasps and ants. However the lack of any formal constitution or steering group resulted in activities declining to a halt. BWARS was relaunched following a meeting of aculeate hymenopterists held at the Natural History Museum in 1986. A steering group with an outline plan of activities was elected. The steering group met for a residential

weekend meeting at Monks Wood to develop these ideas further. A starter pack for aculeate hymenopterists was prepared, and plans made for a twice-yearly newsletter, field meetings, indoor meetings and a programme for targeting species for distribution mapping. Initially, species chosen for mapping were selected for their distinctiveness. The first maps were published in the Autumn 1989 newsletter and were of the solitary wasps, *Ammophila sabulosa* (L.), *Crabro scutellatus* (Scheven), *Ectemnius borealis* (Zett.) and *Philanthus triangulum* (F.). At that time the last mentioned was a rare insect confined to the Isle of Wight, Suffolk and Norfolk.

As the scheme grew in both members and output through its newsletters and meetings, Paul Harding of Monks Wood Biological Records Centre suggested putting the maps and species accounts into a Provisional Atlas format which would be published by the Biological Records Centre. It was decided to continue with the annual lists of target species as there was insufficient manpower available to process data on the nearly 600 species of aculeate Hymenoptera occurring in the British Isles. These will be used to produce Provisional Atlases covering about 60 species and the aim is to publish an atlas at two-year intervals.

In order to achieve this more ambitious programme, a more organized approach than the earlier *ad hoc* selection of target species was required. Stuart Roberts and a team of co-ordinators took on the task of revising the previous maps, suggesting species for future atlases and forward planning of BWARS activities. Robin Edwards is Atlas Editor and is responsible for maintaining a consistent style and quality in the species accounts. Draft maps and species accounts appear in the newsletters before they are finalized for the Atlas. The selection of species to appear in an atlas is now planned four years in advance. The first Provisional Atlas was published in 1997 and it is hoped that the second will be available in 1998, after which they should come out at two-year intervals.

Mr Edwards then showed some of the maps that have been produced and discussed their significance. Maps of the bee-wolf, *Philanthus triangulum* (F.), show how this once rare species has become widespread in England and is continuing to expand its range. This may be due to increased temperatures in late summer when the wasp is nesting. The ant *Formica candida* was originally thought to be confined to the New Forest area but is now known to be present on the South Wales coast. There is no evidence that it is spreading but it might be found elsewhere in suitable habitats. The solitary wasps *Cerceris ruficornis* (F.) and *Symmorphus crassicornis* (Panz.) appear to be widespread in Southern England but they are associated with lowland heath and have declined as a result of loss of habitat. Distribution maps of the sand wasp *Ammophila pubescens* Curtis and the bee-fly *Thyridanthrax fenestratus* (Fallen) show a close match and support the suspected association between these species. Recent maps of the bumblebees *Bombus distinguendus* Morawitz and *B. sylvarum* (L.) show a dramatic reduction in distribution compared to David Alford's maps produced in 1980. Some of Alford's data is suspect as it is not supported by voucher specimens and traceable site details. Two social wasps, *Dolichovespula media* (Retzius) and *D. saxonica* (F.), have colonized Britain during the 1980s and their spread has been monitored by the mapping scheme. During the same period *D. norvegica* (F.) has become less common in southern England and may have been replaced by the new species.

Future activities of BWARS include an updating of earlier distribution surveys of social wasps and bumblebees. It is hoped to hold a 1999 summer field meeting in south-east Eire. Mr Edwards concluded his talk by offering named voucher specimens of aculeate hymenoptera that were surplus to his requirements.

OBITUARIES

Dr Patrick Joseph Lindsay Roche, 1919–1995

Patrick Roche was born on 8 June 1919 and was educated at Bedford School and the Middlesex Hospital from which he qualified as a doctor. He went to Nigeria in 1944 and after some tours as a medical officer he became a forensic pathologist. He returned to the UK in 1956 and taught forensic medicine at the universities in Leeds and Cardiff. He then, as he put it with his customary dry wit “moved from the dead to the half dead” and became the medical officer at Pentonville Prison. He later worked in Sabah as the State Pathologist and in the Seychelles as a general medical officer before retiring to Andorra.

He was first interested in entomology at an early age, collecting Lepidoptera, but a summer holiday whilst at school was spent at Rothamsted where he assisted C. B. Williams in sorting the catches from the light traps there. He used to refer to this summer as the start of his serious enthusiasm for entomology. Before going to Nigeria he joined the “South London” (as it then was) and became a Fellow of the Royal Entomological Society. All spare weekends were spent in the company of Leonard Bushby and A. M. Massee (both members of the South London) in the field, collecting Coleoptera and Hemiptera.

In Nigeria, he concentrated on the Rhopalocera and formed a useful collection. He revised the Lycaenid genus *Epitola* (the butterfly *Liptena rochei* Stempffer 1951 is named for him) and with John Boorman started and published the first parts of an Atlas of Nigerian Butterflies.

Back in the UK he reverted to the Hemiptera and used to collect regularly with Basil MacNulty (whom he had known in Nigeria), John Newton (also a doctor in Pentonville), A. M. Massee, T. R. Eagles and others, all from the “South London”. He was on the council of that society from 1972 to 1973.

Hemiptera, especially the Pentatomidea, formed the most important part of the rest of his entomological life in Sabah, the Seychelles and in Andorra. In the latter, he expanded his collecting to include all orders that could be preserved dry. His collection of Andorran insects was by far the biggest ever put together and the Government asked him to prepare an exhibition of them.

Dr Roche remained unmarried. In appearance he was tall and thin and for a time had a goatee beard. His London tailor once celebrated him as his “thinnest customer”. John Boorman wrote “He was essentially a private person, somewhat difficult to get to know, but once you did he was a warm and generous person. He was very kind to me, introducing an enthusiastic collector to the delights of the West African fauna”. Dr Roche was a knowledgeable philatelist and an expert on Nigerian and Chinese stamps. Like his brother Giles, Patrick Roche was a great music lover and music always formed an important element in his life.

He was a Knight of the Order of St Sylvester (so created by Pope Paul VI), a Special Life Member of the BENHS, a Fellow of the RESL and of the Linnean Society, and a Member of the Institute of Biology.

Andorra became his adopted place of retirement where he had many close friends. He died on 23 March 1995, following an illness, and his memorial plaque overlooks the mountains near his home in Andorra, St Julia de Loria.

It was Dr Roche’s wish to establish a Trust for the promotion of knowledge of the fauna and flora of Andorra. This is now in course of establishment with the trustees being one appointed from BENHS (currently Derek Stimpson, his executor), one from the Andorran Government, one from the National Museum of Natural

History, Leiden, Netherlands (Dr Rienk de Jong) and the last being the Registrar of the Royal Entomological Society. His collections are now in the Leiden Museum. The Leiden Museum will undertake to return an Andorran representative collection to Andorra when there is a museum and curator available. It is hoped that arrangements can be made for Dr Roche's apartment (now owned by the Trust) in Andorra to be available in the future for use by visitors studying Andorran fauna and flora. Such visitors will be expected to prepare a paper of their studies for publication. It was Dr Roche's wish to thus contribute to the furtherance of knowledge about his adopted home.

DEREK STIMPSON

Dr Marcel Lainé

The Society was saddened to learn from a French journal (*Alexandor* 20: 65) of the death in August 1997 of Dr Marcel Lainé at his home in La Haye Malherbe, near Rouen, France. He had been for twenty-five years our host in Normandy and had visited us in this country.

To celebrate the Society's centenary, Leslie Crick led a group of members in May 1972 to Le Havre where Ted Wiltshire, the lepidopterist and consul, had asked Lainé to assist him in their trip, both there and near Rouen. In those years Lainé was President of the Natural History Society of Elbeuf, a town on the opposite bank of the Seine to Rouen and a suburb of that city. Our party also contained Messrs D. O. Chanter and P. A. Boswell. It spent two nights at the Hôtel de la Marine at Tancarville, having found *Spialia sertorius* flying on hills at Rogerville near Le Havre. Later, on slopes at Le Hamet above the river Eure, a tributary of the Seine, they found the fritillary *Euphydryas aurinia* and other species flying in plenty. Later that year Lainé visited Crick in England.

In June 1973 Crick, accompanied by his wife and Willy Tams, drove to Caudebec on the Seine below Rouen, where the Wiltshires joined them at the Hôtel de la Marine, and they visited several localities, being joined by a larger party of French naturalists at Le Hamet on the Eure. The visitors then visited other parts of France and Switzerland, separately. In both years our members were entertained by Lainé and Mme Lainé.

In 1992, when Dr Lainé had become President of the Association Entomologique d'Evreux, the BENHS began a fruitful liaison with that Society. Our meeting was held in Rouen that November, and was memorable for the successful entomological "workshop" and the lavish hospitality afterwards. The following year, Dr and Mme Lainé led a return visit to Dinton Pastures and endured stoically a typically wet, cold Field Meeting in Pamber Forest. Afterwards, members of the visiting party stayed overnight with BENHS members, the Lainés with Dr John Langmaid, at whose home everyone gathered before seeing the French party away on their journey home from Portsmouth. Since then, we have enjoyed another meeting in France and developed several close personal friendships with colleagues across the Channel. Dr Lainé is remembered with affection by us all.

E. P. WILTSHIRE & B. GOATER

BOOK REVIEWS

The butterflies and moths of Bedfordshire by V. W. Arnold, C. R. B. Baker, D. V. Manning and I. P. Woiwod, 416 pp. & 16 pages of colour plates, 30 black and white photos, hardback, ISBN 0 950 6521 56. Published 1997 by the Bedfordshire Natural History Society, 9 Ullswater Road, Dunstable, Bedfordshire, LU5 6JP. £14.90 plus £3.70 postage and packing (UK).

Larger Moths of Surrey by Graham A. Collins. 333 pp & 16 pages of colour plates, hardback. ISBN 0 9526065 2 6. Published 1997 by Surrey Wildlife Trust, School Lane, Pirbright, Woking, Surrey, GU24 0JN. £18.00 plus £2.00 postage and packing (UK).

For many decades up to the 1960s, county Lepidoptera lists were usually limp-backed booklets with minimal illustrations, minimal text and a coded presentation of records. All these measures were designed to reduce the amount of paper used and to keep production costs to the absolute minimum. As well as the obvious economic considerations, the view may have been taken that these were to be shortlived documents, to be updated and expanded within a matter of a few years to keep pace with increasing knowledge. This happened in some cases, but in others there were no supplements or later editions and some counties in Britain are still served only by hard-to-find and much dog-eared and dilapidated copies of lists published before many of us were born. However, that these lists are frequently grubby and falling apart is a measure of how useful county lists remain. Old records are never obsolete. Even when species have disappeared and their sites have been changed, the records remain important datum points for assessing environmental change.

County Lepidoptera lists have continued to appear regularly since the 1960s but the two volumes reviewed here, which are front runners in their class, show just how far the county list has developed since the 1960s. Both lists are protected by hard covers, the covers of the Bedfordshire list being glossy with a colour photo on the front as introduced in 1974 by Barry Goater's Hampshire & Isle of Wight list. I hope the glued rather than stitched binding of both new lists will last as long as the covers. The Bedfordshire list features a small copper butterfly *Lycaena phlaeas* (L.) on the lime green front cover and a red underwing moth *Catocala nupta* (L.) on the back and these colourful photographs are the first clue that these books are designed to appeal to more than the die-hard and committed lepidopterist. The Surrey list has a glossy wrapper, also with a striking colour photograph, but this time of a speciality of the county, the heart moth *Dicycla oo*. This photo will serve to catch the eye of most naturalists but will also appeal on another level to the lepidopterist in the know.

The other great development, a feature of both the Bedfordshire and Surrey lists, is the inclusion of dot distribution maps which, for moths, were introduced at the county level in the 1980s in the lists for Essex (Emmet & Pyman, 1985) and Northumberland and Durham (Dunn & Parrack, 1986) among others. Distribution maps give an immediate and clear impression of the spread of records in the county and often reveal patterns and changes of distribution which are nowhere near as apparent from lists of sites and dates, particularly if one is not familiar with the geography of the county. The Bedfordshire list includes over 1300 distribution maps. Butterflies are mapped on a tetrad (2 km × 2 km) basis within 10 km squares, with 1990–96 as the most recent date class. Most of the other butterfly records date from 1977–89 but older records are shown on the maps and mentioned in the text, with separate symbols for the periods 1900–76 and for records made prior to the

publication of the *Victoria County History* (VCH) (i.e. 1904). The moths are shown on a 10 km square grid. Most of the moth records are for the period 1970–96 but some records for the 1960s are included. Other symbols are used where the only records are for the period 1900–1959 or pre-VCH and details of these earlier records are mentioned in the text. Maps are provided for the microlepidoptera as well as the macro-moths, using the same format. The Surrey volume is only concerned with the macro-moths but takes mapping one stage further and in this it sets a new standard. The moths are mapped on a tetrad basis and each map shows the main geological features of the county to help reveal patterns in distribution. The maps show the distribution of those species recorded since 1976 and have a single symbol for the period 1976–96. Earlier records are referred to in the text, with references. Interactive electronic technology and portable lap-top computers are already with us for future generations of county lists and offer great possibilities, but you can take a book to bed, write in the margins and the technology to use it does not become obsolete in a few years, so these latest volumes are likely to become as well-thumbed as their predecessors.

Now to the text of each volume. The Bedfordshire volume is the first comprehensive annotated listing of the moths and butterflies of the county since the VCH in 1904, though reports on the Lepidoptera have appeared in *The Bedfordshire Naturalist*, published by the present Bedfordshire Natural History Society since its formation in 1946. The book contains extensive introductory chapters which collect together valuable and interesting background information to the list. These sections include details about the most active of the lepidopterists who have recorded moths or butterflies in Bedfordshire over the years, the habitats and key sites in the county, and a chapter by Ian Woiwod on monitoring changes in population size and in the diversity of Lepidoptera. Ian is well known through his work and publications concerning the nationwide Rothamsted Insect Survey. He also happens to live in Bedfordshire, where he has been running a Rothamsted trap in his garden since 1976 and helping on local butterfly transect counts. The fascinating section on habitats and sites by Charles Baker and Vic Arnold includes several pairs of photographs which reveal the extent to which sites have altered over periods ranging from 10–100 years. To the many whose experience of Bedfordshire is based on driving through it on the A1 or M1, this section will be an eye-opener.

The main part of the Bedfordshire volume consists of the individual species accounts, arranged in Bradley & Fletcher (B. & F.) order, with a paragraph of introduction to features of each family and subfamily. These introductory paragraphs include the number of species found in the county. The accounts are necessarily brief to encompass all the Lepidoptera in a manageable volume. The accounts consist of a comment on any known pre-VCH records; the comment from the VCH; a post-VCH comment, which for most of the widespread or common species is a summary of the current status but otherwise details important records and changes in status; a note on the flight season and another on the larval foodplant(s). The foodplants are flagged with a star if based on records from Bedfordshire rather than drawn from the standard texts. David Manning wrote the micro-moth accounts and has included much new information based on his intensive work since 1985. Vic Arnold wrote the macro-moth accounts. Vic has been county recorder for the larger moths for nearly twenty years and has known the moths of the county for nearly fifty. The butterfly accounts, by Charles Baker, follow the same format but have been allotted more space and are more detailed. Charles is a retired entomologist from MAFF who became county butterfly recorder in 1993 and undertook much of the historical research for this book. For all species the

distribution maps sit alongside the species account. The VCH included a reasonable number of micro-moths as well as the macros but it is clear from the layout of the list that the Lepidoptera of the county are much better known now than then.

There are nine pages of references plus appendices of butterfly transect results and indexes for both species names and site names (the latter including grid references). The colour plates feature a selection of species, arranged by habitat, which will serve to show non-lepidopterists some of the moths and butterflies dependent on the chalk downland, woodland, hedgerows and gardens of Bedfordshire and which may be locally at risk if these features are not appropriately managed.

Maitland Emmet has contributed a thoughtful foreword and the text is interspersed by many line drawings of micro-moths by David Manning and butterflies and macro-moths by Bernard West.

The Surrey volume is a companion to the butterfly volume published in 1995 by the same author and is the third volume to be produced by the ongoing Surrey Invertebrate Atlas Project. The only previous listing of Lepidoptera to cover the whole county is the VCH of 1902, but Evans & Evans (1973) produced an updated list for Croydon and north-east Surrey. This new book contains full references to Evans' list and the various other lists which have included parts of Surrey. Also included are details of the most recent lists for the surrounding vice-counties, all of which have been published since 1960, as one might expect from such a well-populated and relatively well-recorded part of Britain.

The book begins with brief sections on the lay-out of the vice-county, the geology and the available moth habitats. It also includes a short section on collecting and conservation, which emphasizes the key importance of conserving habitats. There is a table showing the 13 species which have become extinct in the county since 1950, with last dates. Two additional species have seriously declined since 1950. Conversely, a dozen species have increased significantly and three have been discovered as resident. This is followed by a brief explanation of the techniques used to find moths and a clear explanation of the terms used to define national and local status in the species accounts.

The species accounts form the bulk of the book and include all the families usually accepted as macro-moths, including the Hepialidae, Cossidae, Zygaenidae, Limacodidae and Sesiidae. These are arranged in taxonomic order, following B. & F. order, but without the B. & F. numbers, so there are no gaps in the numbering to draw attention to the absence of related species from the county. As in the Bedfordshire list, each family is prefaced with a paragraph about the general features of the group. A different format is used for the species accounts. By concentrating on the macro-moths, greater space is available for the individual moth accounts than in the Bedfordshire volume. The comments for Surrey are correspondingly somewhat more detailed and sometimes contain additional information on the larval behaviour and other observations. Each account starts with the current status in the county, beginning with whether it is resident or migrant, then detailing the type(s) of habitat in which it occurs and the distribution and abundance within the county. Species which are nationally scarce or of Red Data Book status are labelled as such. The voltinism and flight season of the adult are given, followed by the larval foodplants as determined within Surrey. As in the Bedfordshire volume, the phenology of the immature stages generally is not given however, reflecting the current bias of recorders to the adult stage and the overwhelming popularity of light-trapping. Then follows a comment about the species and, for scarcer species, a listing of records with site name, date and recorder. The early knowledge of the species in the county is covered for the less frequently recorded species and the accounts are admirable and

fully referenced. However, there is no systematic reference back to the VCH for all species, so less of a historical perspective is provided regarding the state of knowledge of species assumed to have been frequent over the long term.

The Surrey list includes appendices of plant names, site names with grid references, a bibliography and indexes to the moths. The first of the colour plates shows species which are probably extinct in Surrey, and sadly features the orange upperwing *Jodia croceago*, the four-spotted *Tyta luctuosa* and the white-spotted pinion *Cosmia diffinis*, among others. A plate such as this and the tabulation of extinct and declining species should be features of all subsequent county lists because they most effectively highlight the species we are in danger of losing (or have lost) and help sound the warning to neighbouring counties. Such tabulations have already featured in some previous county lists such as those for Derbyshire (Harrison & Sterling, 1986) and Yorkshire (Sutton & Beaumont, 1989). The other colour plates feature a selection of adult moths by habitat and some fine photographs of larvae, taken by the author and by Jim Porter. A foreword is provided by Bernard Skinner, a resident of the county, and he emphasizes the changes in the habitats and the moth fauna of Surrey and the importance of county lists as baseline data.

As a keen user of such lists, I looked up a few species of particular interest immediately I encountered these books and found the accounts most helpful. Both Vic Arnold and Graham Collins are members of the National Recording Network for the Rarer Macro-moths and had already contributed data and I was pleased to see that the accounts backed up and summarized the information available to me as co-ordinator of the Network. Readers of this review will no doubt have species they are particularly interested in and I am sure they will enjoy many hours delving through both books. I was particularly anxious to see if Graham had received any records of the orange upperwing in the last couple of years because several searches have been made, but sadly the last record in the account is from 1983 as I feared and Graham considers the moth possibly extinct in the county. Graham also considers that the four-spotted may have been lost. I was hopeful that it was surviving on Mitcham Common, but it has not been seen here since 1983 apparently. I was pleased to see that in Bedfordshire the four-spotted has been seen in two sites in 1996 and another in 1995. I was interested to see if Vic mentioned a record of the Barberry carpet *Pareulype berberata* which has become somewhat notorious. The record originated from the Rothamsted trap at Sandy Warren between 1969–71 and was copied to the Biological Records Centre, Monks Wood, and subsequently to the Invertebrate Site Register. It still roams around in various versions derived from these data-bases but some years ago both Ian Woiwod and Vic Arnold confirmed to me that this was an error of identification. Vic has taken the view that the species should not feature in the list at all because it has never been recorded reliably in the county. Because dubious records are so easily copied from one data-base to another, one wonders if future county lists may need to include a rogues gallery, perhaps as an appendix, to formally debunk records which are known errors but which are likely to surface again from time to time. In the Surrey volume there is no mention of the ringed carpet *Cleora cinctaria*, though there are old reports of the moth from the county. Is this because these reports are now known to be in error I am wondering?

One other comment arising from reading both books together is that it would be useful for future county lists to standardize regarding year classes and symbols when mapping records. This would be particularly helpful for those of us who often have to quickly compile maps for several counties together, or for the country as a whole, sometimes without access to all the original data. Year classes which overlap two decades can be a real problem. Both these books start a year class around 1976–77

and run on to 1990 or 1996, presumably because the glorious summer of 1976 stimulated a surge in recording Lepidoptera. However, BRC use year classes which start at the beginning of decades. Even with the latter method it is not always agreed whether the decade should run from e.g. 1960–69 and therefore consist of post-1959 records or from 1961–70 and comprise post-1960 records. I tend to consider 1960 as part of the sixties not the fifties and prefer the former method. With the new millennium coming up, I propose we all adopt a new year class for the year 2000 onwards.

The publishers of both volumes have managed to attract sponsorship and grants for these lists to help defray the production costs and keep the purchase price within very reasonable limits for such quality publications. The sponsors for the Bedfordshire volume include various charitable trusts, Luton Borough Council, Unilever Research Ltd and the Beds. & Northants. Branch of Butterfly Conservation. The Surrey volume received financial support from the BENHS, the Corporation of London and Butterfly Conservation. These organizations are to be thanked for helping to make these lists possible in their current form. The authors can be congratulated for compiling such large amounts of data into such accessible form, tasks which have taken many years to complete. Neither list would have been possible without an army of field recorders; the Bedfordshire volume lists some 350 by name, the Surrey volume just over 100.

Both volumes will appeal to anyone with an interest in the Lepidoptera of the respective counties but hopefully will reach a wider audience of naturalists, conservationists, land managers, planners and libraries, to all of whom these books can be whole-heartedly recommended.

PAUL WARING

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**OBSERVATIONS ON THE "GUEST ANT" *FORMICOXENUS*
NITIDULUS (NYLANDER) IN NESTS OF THE RED WOOD
ANT *FORMICA RUFA* L. IN 1997**

NEIL A. ROBINSON

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Formicoxenus nitidulus is a small, shining myrmecine ant which lives as an inquiline within the large mound nests of the wood-ant *Formica rufa* and related species (e.g. *F. lugubris* Zett. and *F. aquilonia* Yarrow). It nests in small colonies in hollow twigs within the host's nest and thus is difficult to detect except on occasions when workers, males or winged females emerge onto the surface of the mound (Bolton and Collingwood, 1975). Males, which are about 3 mm long and have a shining black abdomen and reddish head and thorax (occasionally pale yellow), are wingless and closely resemble workers but have 12 segments in their antennae whereas workers and queens have 11. *Formicoxenus* mixes freely with the host workers, apparently obtaining food from them when they are regurgitating and escaping with agility if attacked (Brian, 1977). It occurs locally in most of the wood ant areas of England and Scotland, but as it is seldom seen it is not known what proportion of wood ant nests contain it. It has rarely been recorded in Wales or North-west England, and was not known in Lancashire prior to 1996 (Garland and Appleton, 1994). There are differences of opinion as to whether it is actually a parasite (Skinner and Allen, 1996) but Holldobler and Wilson (1990) consider it to be an example of xenobiosis: "the relationship in which colonies of one species live in the nests of another species and move freely among the hosts, obtaining food from them by regurgitation or other means but still keeping their brood separate".

GAIT BARROWS NNR

On the morning of 10 September 1997 I visited Gait Barrows National Nature Reserve, Lancashire (SD483775) to record the condition of nine nests of *F. rufa* which I have been keeping under observation as part of a more general study on the status of this species in NW England, but where I had never seen *Formicoxenus*. I had previously found it in one nest on Arnside Knott, Cumbria (SD455775), 3 km to the west, on 21 October 1996, and it also had been found at Eaves Wood (SD465763) 2 km to SW on 9 July 1996 by the National Trust Biological Survey Team (A. P. Foster, pers. comm.), which was the first record for Lancashire. I found numerous individuals, which I subsequently identified as males, running about on the surface of the first nest I looked at. They were most easily seen on the lower, more humified, part of the nest below the thatched mound on which the *F. rufa* workers were more densely active. Most of the time they appeared to run about with impunity, but if one ran directly in front of a host worker the latter would react and pounce on it, though the *Formicoxenus* always escaped. They appeared to be released immediately—I never saw one disabled in any of these encounters. I then examined all the nests in the woodland which I normally visit and found *Formicoxenus* on the seven which were active (two small nests had been abandoned during the course of the summer). Its presence was not always obvious—it had been my intention to spend up to 5 minutes looking at

each nest, but it was usually seen within 2 minutes and never took longer than 4 minutes. Specimens from the first nest were confirmed as males; I did not see any workers or females.

Wood ants are abundant in the wooded limestone parts of the Reserve, in spite of much of the limestone pavement and woodland (ash, hazel, oak, birch, yew) having been damaged by rockery stone removal before it became an NNR in 1975. The ants evidently survived this upheaval. Indeed it may have benefited their habitat by creating patchy woodland with numerous bare rock suntraps, and many of the nests are now situated in areas which were stripped of their surface layers of stone in the early 1970s. These areas have been slowly but progressively invaded by regeneration from the surrounding woodland. Management of the Reserve includes regular coppicing to maintain more open conditions primarily for the benefit of nationally important populations of butterflies such as Duke of Burgundy and pearl-bordered and high brown fritillaries. Thus the wood ant nests are liable to be subject to the effects of gradual closure of the canopy and sudden reopening. Although *F. rufa* can persist successfully under closed canopy in the Midlands (C. A. Collingwood, pers. comm.), my observations in north Lancashire and south Cumbria, where it is at the northern limit of its range in Britain, suggest that complete shading results ultimately in the demise of nests.

RANGE OF NESTS WITH *FORMICOXENUS*

The *F. rufa* nests at Gait Barrows had been selected to observe the effects of scrub invasion and coppicing, and they demonstrate the full range of conditions which might affect colonies. Three were typical vigorous nests in sheltered but sunny situations on south-facing ride edges, though one of these was beginning to be shaded on the south side. One, found to have a small patch of revitalized (or recolonized?) activity, was a very large old mound of mainly humified material which showed no sign of life in spring 1997 and was thought to have been shaded out before the compartment was coppiced two years previously. A mound of similar size, likewise exposed by coppicing, which was highly active in the spring, had been overshadowed by vigorous growth of rose, bramble and bracken due to increased admission of light. Although there were trails leading from it, the mound had only a few sluggish workers and little new thatch. Another long-established nest, which had become progressively more shaded in recent years, was nearly defunct, but was connected by trails to a vigorous new nest in a sunny situation. Interestingly, *Formicoxenus* was present on both the old and new nests. Holldobler and Wilson (*op. cit.*) consider the ability to emigrate in columns of the host workers, when the latter change nest sites, to be an adaptation to the commensal life.

To see whether this synchronized emergence of *Formicoxenus* was peculiar to the NNR or was occurring elsewhere, I went in the afternoon to Arnside Knott, which is owned by the National Trust. It has numerous *F. rufa* nests and, as at Gait Barrows, scrubby areas are being opened up for butterflies. Here the situation was less clear-cut. I was unable to find *Formicoxenus* at the nest where I first saw it in 1996, but I did find it on 2 other nests. On later visits in September and October I found males on 10 further nests, including the one where I had first seen them in 1996, and on one occasion at one nest I found 2 dealate queens. These are larger than the males and are uniformly dark in colour. However there are several nests where I have not yet seen *Formicoxenus* on any visit.

EXTENT OF *FORMICOXENUS* IN THE HOST POPULATION

The fact that *Formicoxenus* was found in such a wide variety of nests at Gait Barrows, and on every nest which I had looked at in September, suggested that it might be present in all the *F. rufa* nests. It would have been impractical to examine all the nests as there are known to be over 100 on the NNR. Their locations had been mapped in detail by Tony Aldridge, Warden 1980–1992 (Aldridge, 1991) and the most recent survey (Farinacci and Smith, 1996) raised the total to 112. To examine a sample, I set out to see if I could find *Formicoxenus* in every part of the Reserve where wood ants occurred. Unsettled weather delayed observations, but during a spell of anticyclonic sunny weather in October, I was able to establish that *Formicoxenus* was present in all nine management compartments of the Reserve which contained *F. rufa* nests. I found queens (dealate) on only one nest. By this time many nests were shaded and inactive due to the lower angle of the sun. I found *Formicoxenus* only on nests which were still receiving insolation and were active, but the fact that I found it in every compartment which contains nests suggest that it is present throughout the *Formica rufa* population on the NNR.

Mating between the wingless males and winged females is reported to take place on the mound; afterwards some females fly away to look for new nests while others return into the original one (Brian, *op. cit.*). The fact that the two queens found on one nest on Gait Barrows on 29 September, and those found on one nest on Arnside Knott on 21 October, had shed their wings suggests that mating had taken place. I never saw any winged females, and found only males, including some small pale specimens which I had thought might have been workers. The number seen at any one time ranged from one or two to about a dozen. They might be glimpsed anywhere on the mound, but were most frequently seen around the holes where host workers were emerging. When numerous they often came running out 3 or 4 together, which would equate with them originating from their individual small nests, of which there may be many in a single *F. rufa* mound (C. A. Collingwood, pers. comm.). At two sites they were seen running out onto bleached branches and rocks which were projecting from the mound, on one occasion being observed 0.5 m away from the nest on a slab of white limestone. They run rapidly and incessantly, unlike the *F. rufa* workers which proceed in a more jerky fashion, and were sometimes seen to disappear back inside the nest. The response of the host workers depended on their state of activity. When very active and aggressive they would attack, as described above, though apparently without causing injury. At lower temperatures, when they were less active and aggressive, the *Formicoxenus* could run past them, or even under them, without provoking any reaction. The response of the guest to being attacked has been described as to remain motionless, although in rare cases they have been observed to sting the host (Skinner and Allen, *op. cit.*). The latter observation must have been of workers, as males do not possess stings. Occasionally two *Formicoxenus* were seen to grapple with each other. This was on the surprisingly late date of 27 October, on a nest where I saw more males than on any other occasion and they were running out onto a bleached branch where I was able to photograph them. This was the last date on which the males were really active, but on 21 November I visited the same nest and found some very lethargic *F. rufa* workers emerging from two entrances close to a sun-warmed rock. Within these holes I saw some equally lethargic *Formicoxenus* males which were easy to extract for further photographs. However by 1 December the top of the nest had been much disturbed and drilled, probably by a green woodpecker, and there was no sign of either species, which no doubt were wintering in the lower levels of the nest.

AN EXCEPTIONAL SEASON?

I hope that further observations will establish whether this scale of synchronized emergence is an annual occurrence, or whether 1997 was an exceptional year for *Formicoxenus* males. Cedric Collingwood has informed me that during August he looked at numerous nests of *Myrmica rubra* (L.) in the Yorkshire Dales, searching for females of the form *M. microrubra* Seifert, but only found winged males, no females, and that Alfred Buschinger reported the same phenomenon around Darmstadt in Germany at the same time. This raises the possibility that conditions were in some way unusual in 1997, causing ant colonies to produce abundant males, but few females.

ACKNOWLEDGEMENTS

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WANTED

Information on the crepuscular activities and location of dung-associated species in the winter months.

I am involved in research into the diet of the lesser horseshoe bat in the winter months in Cornwall. From faecal analysis it has been found that Sphaeroceridae, Scathophagidae and Mycetophilidae are important, also Tipulidae and Trichoceridae.

Any information please to: Adrian Spalding, Tremayne Farm Cottage, Praze-an-Beeble, Camborne, Cornwall TR14 9PH or email A.Spalding@btinternet.com

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ANNOUNCEMENT

Annual UK Dipterists Meeting

The 1998 Dipterists Meeting is to be held at the National Museums and Galleries of Wales, Cardiff on the weekend of 14–15 November. The Saturday will comprise presentations in the morning (commencing 11.00 am) with informal exhibits, demonstrations and the AGM of the Dipterists Forum in the afternoon, followed by a buffet supper in the evening (tickets only). The Sunday will comprise workshops, demonstrations, informal discussion and field excursions (weather permitting). Full details, including accommodation lists, are available from David Clements, 7 Vista Rise, Llandaff, Cardiff CF5 2SD; tel/fax: 01222 307878.

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